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ACADEMIC PRODUCTIVITY AND THE IMPACT OF THE
NATIONAL EDUCATION PHILOSOPHY IN HIGHER
EDUCATION INSTITUTIONS AS VIEWED BY MALAYSIAN
ACADEMICS

Ed.D.

AMINUDDIN HASSAN

UNIVERSITY OF DURHAM

2006

**Academic Productivity and the Impact of the National Education Philosophy in Higher
Education Institutions as Viewed by Malaysian Academics**

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A Thesis Submitted in Partial Fulfillment of Requirements for
the Degree of Doctor of Education
In the
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United Kingdom
June, 2006

27 JUL 2006



Declaration

This thesis results from my own initiative and work, and has not been offered previously in candidature for any other degree in this or any other university

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Abstract

The purpose of this research is to highlight the valuable perspectives of Malaysian academics in the agenda for accessing productivity achievement and some other factors affecting it. This research is also about the National Education Philosophy (NEP) in terms of how successful its implementation on Higher Education Institutions (HEI) in Malaysia is. The researcher draws eight major conclusions in answering the main research questions. The thesis argues that the most productive role among the academics is teaching, compared to research and administration. Also, different factors give significant effect to different academic roles. Only about 59% of the professors were thought to have been appointed on merit (deserve their appointment). About 35%, 30% and 12% of the respondents have fair, good and very good knowledge about NEP respectively. All NEP elements are considered well implemented, where each of them has an average rating of more than 3 in an increasing scale of 1-5 (least to most). The most frequent constraint among the academics for NEP to be implemented in HEI is the significant burdens that are time consuming faced by them. There is a significant relationship between implementation success of NEP and administration productivity. Lastly, there is a significant relationship between the perspective of academics concerning professorial appointments and the successful implementation of NEP in HEI. However, the last two have modest correlation values in general.

It is shown in the thesis that this is pioneering research because it is the first that has been conducted on a large scale involving academics in a single country. Furthermore, it is also the first research that has been conducted on academics in Malaysia by using an online survey questionnaire, an invention of a new procedure in Social Science research. The response rate of 42.43% looks very promising in comparison with similar procedures in the past. This study is also the first to look at the impacts of elements of NEP and their implementation in HEI in Malaysia. The study reveals the outcomes of academics' productivity by looking at their roles and the factors which affect their productivity, and the impacts of NEP in HEI alongside the possible constraints that could bring valuable positive indicators of the performance of current HEI in Malaysia as a whole.

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LIST OF ABBREVIATIONS

HEI	-	Higher Education Institutions
HTML	-	HyperText Markup Language
IIUM	-	International Islamic University
KUIM	-	Kolej Universiti Islam Malaysia
KUiTTHO	-	Kolej Universiti Teknologi Tun Hussein Onn
KUKTEM	-	Kolej Universiti Kejuruteraan dan Teknologi Malaysia
KUKUM	-	Kolej Universiti Kejuruteraan Utara Malaysia
KUSTEM	-	Kolej Universiti Sains dan Teknologi Malaysia
KUTKM	-	Kolej Universiti Teknikal Kebangsaan Malaysia
NEP	-	National Education Philosophy
RM	-	Ringgit Malaysia (Malaysian Currency)
UiTM	-	Universiti Teknologi MARA
UKM	-	Universiti Kebangsaan Malaysia
UM	-	Universiti Malays
UMS	-	Universiti Malaysia Sabah
UNIMAS	-	Universiti Malaysia Sarawak
UPM	-	Universiti Putra Malaysia (formerly known as Universiti Pertanian Malaysia or Agriculture University of Malaysia)
UPSI	-	Universiti Pendidikan Sultan Idris
URL	-	Universal Resource Locator
USM	-	Universiti Sains Malaysia
UTM	-	Universiti Teknologi Malaysia
UUM	-	Universiti Utara Malaysia
WWW	-	World Wide Web

CHAPTER 1

Introduction



1.1. Thesis framework in brief

The first chapter of this thesis explains the background and foundation for this work. The second chapter provides the relevant literature to justify the intention and orientation of this thesis. The third chapter describes the methodology used which will produce both quantitative and qualitative data.

The fourth chapter contains quantitative data which provides the basis for answering almost all the research questions of this thesis. The fifth chapter is devoted to qualitative data analysis and answers, comprehensively, just one sub-question of the second research question about the implementation of the National Educational Philosophy (NEP) in Higher Education Institutions (HEI) in Malaysia.

Basically, this research has two major components – studying the productivity of the academics and the implementation of the NEP in HEI. While both are important in the context of higher education in Malaysia, the latter is a necessary inclusion for another reason. The researcher is required to investigate the NEP as part of the conditions of the grant that he has been receiving for completing this thesis. Lastly, the sixth chapter is the conclusion of the whole thesis and it also provides some suggestions for further research.

1.2. Brief account of higher education in Malaysia

Since independence, educational and national leaders in Malaysia have been trying continuously to improve the growth of the country by developing the country's human resources. Higher education is one of the areas in which the development of human resources began. School leavers in Malaysia are selected according to a system¹ for filling the places available in higher education. They are then systematically trained to acquire the knowledge and skills they need in any critical and useful discipline. This process is currently ongoing to maintain the development of the nation.

The academics have become an important group in higher learning, as they are required to train the higher education students and thus provide future skilled human resources. Higher education has become a pool of expertise (as it might be termed). This is because it is a base or centre in which academics and senior administrators, who are experts in their own areas, can practice their expertise. Besides that, potential experts are also produced every year in the form of an encouraging number of students who graduate at several levels, namely with diplomas, bachelors, masters or doctoral degrees, so they can work in the private, public and business sectors. They will, of course, be depended on to generate productive outcomes in whatever sectors they are involved in.

University leavers, because of their exposure to various specialized academics and subjects, will generally do better when compared with non-graduates, and their

¹ Good achievement in the Malaysian Certificate of Education (M.C.E.) is required to enter diploma studies, whereas a diploma, Malaysia Higher School Certificate (M.H.S.C.) or Matriculation Certificate (M.C.) is required to take a Bachelor's degree course.

cumulative role is expected to make a healthy contribution to the development of the country. A supporting fact to this argument/opinion can be seen in more and more jobs and opportunities being open only to those who have qualifications (2002page 3). However, according to Wolf, while education, particularly at the tertiary level, is always important for individuals, close attention must also be paid to the type of qualifications, subjects and even the quality level of the university that is required by the job market. Wolf added that if these requirements are not met, the high positive correlation expected between the number of qualified people produced (as a result of public spending on education) and the country's growth rate will be baseless and just a myth.

However, there are cases where a number of people, even without any paper qualifications, have become very successful, particularly in Malaysia, and contributed significantly to the country's economic growth. The implication is therefore that higher education does not matter to government, and it is necessary to counter this view by ensuring that any educational problems are settled at the outset.

It would take a long time to review all the various types of qualifications and subjects that the universities currently offer, but in the short term they can still be greatly improved in content and practicality, and be updated to accommodate current market needs. In addition, in the quality of teaching, learning, research and administration, the universities should constantly strive to achieve world-class standards to complement the job demand. These should be basic requirements for the universities so that Malaysia

can be more competitive. When all of these are fulfilled, it will be generally seen that higher education does matter. The Government should think globally and act locally in supporting the economic growth of the country.

The academics, primarily as teachers, must play a very effective role in moulding the students' minds in ways that are expected by the people of a dynamic society. Teaching is not just simply standing in front of a lecture room and discussing a topic. The academics must be very innovative, creative, up-to-date and inspiring when giving lectures, and must always be looking for other effective ways and methods of teaching so that the students can be trained successfully in the university without wasting any of their time while in contact with the academics.

The academics' indirect contribution to the country is where, through their scholarship, they will produce other scholars who will be important for the country's future economic and industrial development. However, their direct contribution is of course also important, where they themselves are undertaking several roles in developing the country today. These roles include pro-active teaching in a wide range of subjects, highly productive and useful research activities, and energetic administrative work and service² to the community and to higher learning itself. These important academic roles are in line with an official government document which stated the necessity of ensuring

² Can be any form of service within the academic sense. It includes, for example, effective management of the universities, running higher learning centres that make a considerable contribution to academic excellence, and expert consultation offered to government or private agencies.

that Malaysia becomes a centre of excellence in higher education (Kementerian Pendidikan Malaysia, 2001).

Furthermore, in order to make this direction even more profitable and add greater value to what has already been achieved, it would be a good idea to also ensure that the pool of high quality academics and researchers becomes a dynamic asset to the country so that they can attract more interested foreign students and personnel to come to Malaysia to gain experience of the technology and academic expertise and exposure to many critical and useful fields of study and research³. This investment is targeted at bringing in more profit to the country in the long term.

1.3. An ideal idea for operating HEI

There has been an increasing number of Malaysians in search of tertiary education in recent years. Therefore a comprehensive higher education plan should first be prepared so that the expansion and development of higher education will be in line with the aims of the NEP. Specifically, HEI in Malaysia need to structure their tertiary master plans by analysing the needs and objectives of prospective students.

One aspect of an ideal educational objective is that it continues to produce university graduates with a high capability of becoming valuable parts of the country's human

³ In line with this, four education promotion offices have been established overseas for this purpose, these being in Jakarta, Indonesia; Ho Chin Minh City, Vietnam; Beijing, China; and Dubai, United Arab Emirates (Berita Harian 2004a).

resources in all areas. Although these objectives need to be sympathetic to the current development of Malaysia, they should also be able to continue contributing to the building of Malaysia into a quality nation

The Malaysian government also needs to match this ideal objective with its existing resources, and if the resources are not sufficient, efficient and intact, the objective will need to be revised; for example, by allocating appropriate personnel to appropriate responsibilities, training the individuals efficiently, taking a fresh look at the structure of higher education bodies, and always revising the higher education process to continuously improve it. However, any extensive changes to the higher education system must be properly planned to avoid any unnecessary waste of the country's income or resources. A good illustration of the latest changes to the system, that are still being discussed, is the creation of the first ever Ministry of Higher Education immediately after the 11th (in 2004) general election, in response to the re-structured government with more cabinet members. The move was greatly welcomed to support the current important needs of higher education for many parties, especially when the ministry was originally existed merely as a department in the former Ministry of Education (Abd. Rahman, 2004, Saprin, 2004, Utusan Malaysia, 2004). The Ministry of Education still exists even though it has narrowed down its scope to cover only school-age students by totalling excluding the university sector (Jabatan Perdana Menteri, 2004).

1.4. Malaysian HEI

In the context of the advanced developing nations, Malaysia has set a good example by coping with any problems and challenges that have arisen as it expands its higher education (Hussin, 2004). At the time of independence in 1957, Malaysia had only one university. Four universities were established between 1969 and 1971, and now it has seventeen public universities (as summarized in Appendix 1), without counting the private universities that also offer excellent academic services.

In general, HEI, which are always referred to simply as universities in the context of Malaysia, are actually a sector that comprises two major components – the Public and Private Universities - and all of them run undergraduate and postgraduate programmes and also offer diplomas for undergraduate programmes. The former (public universities) are universities that are fully controlled and funded directly by the federal government and indirectly by the public sector (Selvaratnam, 1992). Because these universities are using public funds, this study can be in the interest of all people in Malaysia. This concept of being fully owned by the government is still maintained even though the government suggested, as early as in the 1994, that these public higher institutions should undergo the process of corporatisation (which relates to privatisation), at least in some respects (Berita Harian, 1997a, Berita Harian, 1997b, Nordin, 2005).

Although these institutions have their own governing bodies, in reality all their personnel are government servants. Their decisions and actions are subject to government policies, rules and regulations. Because the set-up of public universities in

Malaysia was historically influenced by the British before Independence, the structure of each of these institutions is very similar to the British university system. Generally, each of the public higher learning institutions in Malaysia is headed by a Chancellor, followed by the Pro-Chancellors, and then a Vice-Chancellor. In terms of policy making bodies, the highest is the University Council, then the University Senate and then the management team of the university. The Chancellor is always the head of a Malaysian state (the King, Sultan or Governor) or their representative. Pro-Chancellors are always high-ranking personnel who have contributed a lot to the country. The council members consist of experts and successful people from the public and private sectors, and this also applies to the Vice-Chancellors of the respective institutions.

The Senate, on the other hand, consists of the Vice-Chancellor, Deputy Vice-Chancellors, Faculty Deans and the Professors⁴ of the institution; therefore all of their members are academics of the institution. The management team implements policy and is headed by the Vice-Chancellor, followed by Deputy Vice-Chancellors, a Registrar, a Treasurer, a Chief Librarian and some other senior officers. Vice-Chancellors, by virtue of their office, head the daily operations of the institutions. Under the centralised higher education system in the current context, they report to the Minister of Higher Education who heads the Ministry of Higher Education which was set up after the election. It seems here that the election fulfilled the popular wish for such a ministry to be created. Even though the purpose of the election was simply to elect individuals, and not to satisfy the desires of a particular group of Malaysians, after their great victory in the election the winning allied parties took an initiative to expand the size of the cabinet by

⁴ Professor is meant here in its British sense, namely the highest academic rank.

creating new ministry posts. This initiative was meant to strengthen some areas that had been given less attention previously. One of them was higher education, which used to exist only as a department in a ministry, but was upgraded into a ministry on its own. This move can be seen and understood as an effort by the government to fulfil the aspirations of Malaysians towards developing public higher learning institutions in a more serious way.

There are currently seventeen public universities in Malaysia, established between 1962⁵ and 2002. Of this number, nine are categorised as universities with various disciplines (UM, USM, UKM, UTM, UPM, UUM, UNIMAS, UMS and UPSI),⁶ and the rest comprise a mega-university with many campuses across the country (UiTM),⁷ an international Islamic university (IIUM), and six university colleges with each of them having fewer than 10,000 students (KUIM, KUSTEM, KUiTTHO, KUTKM, KUKUM, and KUKTEM)⁸. A university college is a new concept in Malaysia and it is further defined as an institution that offers courses focusing on a restricted set of subjects, instead of all areas of knowledge. (KUKTEM, 2004).

Even though all the public universities share common values, each of them has its own unique characteristics. Historically, the oldest university in the country is the University of Malaya (UM). It started in Singapore in 1905 as a medical college called King

⁵ This refers to the University of Malaya (UM), which started to be called by this name in 1949. It continued operating after independence in 1957 and 1962 is the year when UM in Kuala Lumpur severed its links with its counterpart in Singapore, and later on became the first university in Malaysia when Singapore was separated from Malaysia in 1965.

^{6, 7, 8} The full names are given in the List of Abbreviation prior to the beginning of this thesis.

Edward VII College. Later on, in 1949, it merged with Raffles Colleges (established in Singapore in 1929), to become the University of Malaya (University of Malaya, 2004). Not long after that however (in 1956), it operated as two autonomous entities, in Kuala Lumpur⁹ and Singapore. This means that this university was in fact established even before independence (1957) under British administration and when, from that time until 9th August 1965, Singapore was part of Malaysia (formerly known as Malaya). On 1 January 1962, legislation was passed to allow the University of Malaya in Kuala Lumpur to become a university on its own and, when Singapore left Malaysia in 1965, it automatically became the only public university in Malaysia at that time (Education Planning and Research Division, 2001).

The second public university, Universiti Sains Malaysia (USM) was established in Penang, which is in north-western peninsular Malaysia¹⁰, in 1969 to cater for the vast tertiary educational demand in the northern part of peninsular Malaysia. The third public university is University Kebangsaan Malaysia, located in Bangi, about 35 km south of the city of Kuala Lumpur. The unique aspect of this university is the way its establishment was planned. The plan was in accordance with the racial sentiment to protect the Malay language (spoken by the Malays¹¹), as well as to meet their educational needs. Interestingly, this initiative was in fact started some time during the 1930s (Education Planning and Research Division, 2001).

⁹ Kuala Lumpur is the Capital of Malaysia and is located almost in the middle of west peninsular Malaysia.

¹⁰ Malaysia is divided into two major parts – peninsular Malaysia (or West Malaysia which consists of eleven states and a Federal Territory) and East Malaysia (which consists of two states – Sabah and Sarawak). Both of them are about similar in size but are vastly different in population with many more people living in peninsular Malaysia, and they are separated by the South China Sea.

¹¹ The Malays, together with various indigenous tribes of people, originally inhabited the country before the migration of the Chinese, Indians and others.

The fourth public university is Universiti Putra Malaysia (formerly known as Universiti Pertanian Malaysia, or Agricultural University of Malaysia). This university is located in Serdang, Selangor, which is about 20 km south of the city of Kuala Lumpur. It was begun as the School of Agriculture in 1931, then upgraded in 1942 to become The College of Agriculture Malaya, before almost being upgraded again six years later to become the first Malaysian public university. However, the declaration of the Emergency at that time caused the last-minute cancellation of that project (University Putra Malaysia, 2006).

The fifth public university is Universiti Teknologi Malaysia located in the south of peninsular Malaysia. It was established in 1973 as a university specifically focusing on science and technology. Meanwhile, the sixth public university – the International Islamic University Malaysia - is quite complicated in its statute. It became the only public university that is established under the Corporate Act, whereas the rest of the public universities and university colleges were established under the University and University Colleges Act, 1971. So it became a business entity, but at the same time it is still owned by the government. So, the organisational structure of this university is corporate, but all the staff within it are government servants who enjoy the common standards of the government salary scheme. The other unique thing about this university is that it offers Bachelor degree courses to foreign students, whereas the other public universities and university colleges do not. This is because foreign students must be proficient in the national (Malay) language as a basic requirement to enter the other

universities (UNESCO, 1996). The International Islamic University therefore has many expatriate or foreign academics as well.

Universiti Utara Malaysia, located in the very northern part of peninsular Malaysia, is the seventh public university and its major interest during its establishment was in courses related to management, business administration and information technology. The eighth and ninth public universities are located in Sarawak and Sabah respectively, which are the only states in East Malaysia. These two universities are the only public higher learning institutions in East Malaysia. The tenth public university is Universiti Pendidikan Sultan Idris. It started as Sultan Idris Training College for Malay Teachers which was established a long time ago in 1922, during the British administration (Education Planning and Research Division, 2001)

The eleventh public university is Universiti Teknologi Mara. It was started as a training centre in 1956, was then upgraded to a college in 1965, and then to an institute in 1967 before finally being declared as a university in 1999 – chronologically, the centre, college and institute were the Rural and Industrial Development Authority (RIDA) Training Centre, MARA (the Council of Trust for the Indigenous People) College, and MARA Institute of Technology respectively (University Teknologi MARA, 2005a). A very unusual thing about this university is that, even though it is a very large university in terms of its student population and has great diversity in its disciplines of study, it was established only for the Bumiputras¹². This is quite odd in the context of Malaysia as a multiracial and multicultural country but, interestingly, this situation occurred

¹² Bumiputra refers to the Malays and any indigenous people who originally inhabited the country.

harmoniously. This university is very large. Besides having a main campus which has 35,823 full time and 6,269 part-time students (in the year 2003), it also has three satellite campuses, twelve branch campuses (one in almost every state), and six city campuses (University Teknologi MARA, 2005b).

The rest of the so-called public universities are actually the university colleges which were set up within a few years of each other. They are all newly established and are well known as being specific to special areas of study. Furthermore, the student learning is done using a more practical-oriented approach and most student learning time is spent in laboratory settings and with industrial exposure (KUKUM, 2005). In other words, the orientation of most learning and teaching is by practice and application and this is in line with the government's current intention to cater for the human resource needs of Malaysia's industries (KUTKM, 2006). They also have a comparatively small number of students.

On the other hand, private universities in Malaysia vary from the universities that are supported by government business agencies (e.g. Multimedia University of Malaysia, National Power University of Malaysia, Petroleum National University of Malaysia), to those supported by political parties in the present government alliance (e.g. The Asian Institute of Medicine, Science and Technology (AIMST), established in 2001 by the Malaysian Indian Congress political party, and University Tunku Abdul Rahman (UTAR), an education arm of the Malaysian Chinese Association, a political party). In addition, there are also some branch campuses of foreign universities here (e.g. the campuses of Monash University and the University of Nottingham). There are also a

number of local private colleges which run diploma programmes as their main business, and some collaborative bachelor degree programmes which are also encouraged by the government to help meet the vast educational demand throughout the country.

In brief, there are fourteen local private universities and four foreign university branch campuses at this moment, catering to a high demand for tertiary education in Malaysia. Higher education also consists of nearly seven hundred private colleges to support this demand from a rapidly developing country.

The development of the higher education sector in Malaysia, consisting of public and private institutions, looks encouraging when considering the increasing number of institutions in recent years, but this does not mean that the demand for tertiary education in Malaysia is fulfilled. How far this demand is fulfilled can be indicated by the proportion of young people attending the various HEI and how this compares with other countries in the region and with the UK as well as an example of a developed country. Statistical data published in 1992 shows that the percentage of the 20-23 year old cohort attending university in Malaysia was 7%; it was 5% 7%, 16% and 28% in Burma, Singapore, Thailand and The Philippines respectively (Yee, 1995). These four countries, together with Malaysia, are countries in Southeast Asia that share many common values, and comparing the percentages for university enrolment of the student-age cohort seems reasonable. According to Yee again, in the U.K., as an example of a Western developed country, the percentage at that time was 24%.

Several years later, the great educational development of the U.K., which provided opportunities for more school leavers to go into higher education, brought the proportion to 32% of those in the 18-21 age group (Gibbs, 2001). Malaysia, on the other hand, had only 9.95% of the 19-24 age group in higher education in 2003 (Malaysia, 2004). This is the percentage of the age group or cohort attending public HEI, but even if this percentage were doubled to 20% to include those entering private institutions (which is not very likely as private institution enrolment is always understood as being at a much lower level), the gap between the percentage in Malaysia and in the U.K. is still wide. By simply looking at the comparison between these two countries as an example, it can be deduced that there is still plenty of room for Malaysia to cater to the needs of its qualified young people¹³ seeking higher education. There are about 100,000 students who want and qualify to go into HEI in 2005/2006 intake who cannot do that (Utusan Malaysia, 2005, Wahari, 2005). The increasing number of HEI established nowadays cannot solve this problem simply by being there. More action is required, and building up new universities is only one of the solutions.

1.5. Significance and importance of the study

For a developing country like Malaysia, which aims to become a developed country by the year 2020, and where higher education has become important as a pool of expertise

¹³ An example is those school leavers whose Malaysian Higher School Certificate (M.H.S.C) {taken at the end of Form Six} results meet minimum requirements to get into universities, but they are unable to go to university to study because the public universities are full and private universities/institutions are too expensive, offer very limited courses, or their qualification are not well recognised.

of which the academics are a part, this study is important in two ways. First, it aims to provide an insight into academics' productivity in Malaysian public universities. Secondly, from the academic perspective, it aims to ascertain the extent to which the NEP has been implemented in the present higher education system involving the students and also the academics.

In looking at the first aim, that of identifying how productive the academics (including the professors) are in teaching, research and administration in universities, and then considering some related productivity factors or constraints, it can be seen that this study has importance for the country's future, as Malaysia needs to be continually advancing in knowledge generation. The need is for an independent and high capability in constructing new technologies and the production of efficient personnel in many important areas. Universities must become very important centres for producing resourceful personnel in a wide range of disciplines to maintain the future development of the nation. The academics themselves must also be highly resourceful in fulfilling this purpose. In the context of Malaysia, public universities have taken on almost all of these responsibilities and their important role is well recognised by the government.

In line with this goal, there are many new public universities that have been built recently to cope with this optimistic plan for rapid development and vastly increasing demand. As it is still understood that some academics in public universities are not of high enough quality to train the students (Netto, 2004), this research aims to identify the productivity and constraining factors that determine whether the public universities' academics are able to fulfil their roles given the current scenario in Malaysia. They may

not be sufficiently productive because of several factors. It could be because of lack of the latest technology, training and useful resources, which can be difficult to obtain at this present time. It could also be because the academics are not competent enough due to being badly selected for their position at the outset, or because they themselves are not the right people in terms of perseverance, motivation, capacity for hard work and willingness to take on responsibilities.

In considering research productivity first, historically we can see that the establishment of research universities in Europe in the late nineteenth century paved the way for the expansion of scientific studies, as well as social sciences and humanities studies, up to an international level (Altbach & Lewis, 1996). This tells us about when the active research in many disciplines was getting started generally. So, in theory, research productivity in any discipline should be encouraged and this is what should be happening in Malaysia now.

Ngah (2001) carried out a study to obtain information on this (research productivity). She explored some factors related to academic research productivity when she was studying Malaysian academics. Even though she produced useful results in identifying some significant factors, her study only observed academics in science and engineering disciplines. Furthermore, these two fields of knowledge are in fact within the same category of discipline and so the significant factors that affect one field but not the other cannot be taken as a contribution to the assessment of Malaysian academic research as a whole. In addition, if we want to look further into academics' productivity outcomes, an even wider focus of study is required.

It is essential to stress how important it is to identify and verify some of the major factors that affect academic productivity. These include: different academic ranks, different disciplines, types of institution, and attitudes towards teaching, research and administration (Altbach & Lewis, 1996). In this regard, the relevance of this research is justified because it looks at academics across all disciplines, of all academic ranks, at different universities (six selected universities which are different in type and background), with different amounts of time for teaching, research or administration, with (presumably) different levels of productivity in teaching, research or administration, and other factors.

This research is wide but it does focus on a number of factors that can affect the role productivity of Malaysian academics, and also the levels of productivity itself are studied. It also addresses the question as to how far the implementation of the NEP has gone in higher education in Malaysia. This is another way to show how important this study is. Philosophically, fewer parties can impose their ideals on students or academics (as could happen, for example, in schools) as university members are autonomous people who will decide for themselves what they want to do within the teaching and learning process in the universities (White, 1997). What one can do is look to see how far the excellent values (as expressed in the NEP in this context) are being implemented in the universities, and the extent to which these will affect the students and the academics. In this way, the public needs can be seen as being fulfilled or not, and the government can then decide on whether to revise or maintain the policies in question.

1.6. The purposes and objectives of the study

The first purpose of this study is to identify the level of productivity of Malaysian academics, before proceeding to the second purpose which is to examine the conditions and factors that enhance or reduce their productivity when performing their roles. Leading on from these purposes, this study will be able to identify the characteristics of Malaysian academics, both productive and unproductive.

The third purpose is to identify the percentage of professors in Malaysian public universities whom academics think deserved to be appointed to that position, by looking at their productivity. In regard to this, the professors (as the highest academic rank in the Malaysian context) are assessed here because their productivity becomes an important indicator of overall academic productivity. The way of assessing this is to look at their deservedness to be appointed to their current posts by looking at their overall productivity at that time and then by considering the views of their colleagues. This research will also look at how this perspective varies across faculties and universities.

The fourth purpose of this study is to assess the level of knowledge and understanding of the NEP among Malaysian academics. The fifth purpose is to provide a perspective on the success of the implementation of the NEP in HEI in Malaysia. The sixth purpose is to acquire personal opinions from academics regarding the possible constraints that exist alongside the process of implementing the NEP in HEI in Malaysia. Lastly, the seventh

purpose is to find some kind of relationship between academic productivity indicators and NEP implementation indicators.

For the first purpose, academic productivity (in relation to teaching, research and administration) in various HEI is assessed here on a self-rated basis. For the second purpose, the profiles of the academics will be looked at, which will also include the conditions of their present posts, the disciplines of expertise that they are involved in, personal characteristics, academic background, professional attitudes, perspectives regarding the academic climate of their institutions, their publication record, and their teaching quantity, as well as descriptions of any administrative service given. Meanwhile, the third purpose is an effort to consider the current integrity of the professorship institution in the public university itself and this will be established from the perspective of the whole academic institution at all levels, which will involve the process of self and peer assessment at the same time.

The fourth purpose is to evaluate how well the concept of the NEP is understood. For the fifth purpose, the method for looking at how well the NEP implementation is understood is by assessing each element of the NEP, and also as a whole, to see how far each of them is being implemented for the benefit of the students and the academics in the university system in Malaysia. The researcher will be the first to do this in the context of the philosophy of higher education in Malaysia. In relation to this, the university system in Malaysia needs to be clarified first in relation to the perspectives, so as to understand the system better. The nature, features and background of each of the public universities has already been identified, such as year of establishment; location, number and size of

their branches; whether they have university or university college status; type of staff by general category (such as Malaysian or expatriate); and under what circumstances and act the universities were established.

The sixth purpose of this study is to gather as much information as possible from open-ended responses on constraints of any type that have potentially affected the NEP's implementation in HEI. The seventh purpose specifically focuses to look at the relationship between implementation success of the NEP and academics' productivity, and the perspective of professorial appointments and successful implementation of the NEP in HEI as two examples of important relationships to look at.

1.7. Research questions

In properly following the purposes and objectives of this study, three research questions, together with their sub-questions, are outlined as follows:

1. How productive are Malaysian academics and what affects their productivity?
 - a) How productive are the academics in the roles of teaching, research, and administration services?
 - b) What factors reduce or enhance the academics' productivity?
 - c) How many professors are viewed as deserving to be appointed as professors according to their productivity?

2. To what extent is the NEP a reality in HEI in Malaysia?
 - a) What is the level of knowledge about the NEP among Malaysian academics?
 - b) How successfully has each element of the NEP been implemented in HEI in Malaysia?
 - c) What are the constraints working against the concept of the NEP being practically implemented in HEI?
3. What is the relationship between indicators of academic productivity and indicators of implementation success in the concept of the NEP?
 - a) What is the relationship between implementation success of the NEP and academics' productivity?
 - b) What is the relationship between the perspective of professorial appointments (how many are deserved) and successful implementation of the NEP in HEI?

The first research question deals with academic productivity. The first sub-question seeks an answer about the level of academics' productivity in three basic roles: teaching, research and administration. The second sub-question attempts to identify factors that enhance or reduce their productivity by looking at certain relationships. The third sub-

question seeks to find the academics' perspective on the proportion of current professors who really deserved to be appointed as professors in the first place. In line with this, this study will also try to discover whether the perspective varies across different universities¹⁴.

The second research question seeks to examine the level at which the NEP exists in HEI. This comes with three sub-questions too. The first seeks to ascertain the degree of knowledge of the NEP among the academics. For the second, the academics need to assess the success or otherwise of the implementation of the NEP, by looking at each element inside it. The third seeks to identify any constraints on the practical implementation of the concept of NEP in HEI. The number and level of constraints that exist could in some ways affect the existence of the NEP in HEI. The academics are requested to give their opinions openly here in recognizing constraints damaging to the implementation of the NEP in HEI. This will help to identify if there need to be some particular internal or external policies that can then be introduced by the universities to react to this useful information. It might be necessary, for example, to have government involvement in the universities' decision making. However, before that, the constraints should first be identified as to whether they really exist. The effectiveness of the universities' administration in handling matters of academic programmes, student development, research and development, facilities development, and economic resources can also be identified when respondents come to this section in the survey questionnaire. These are just a few examples from a long list that will be highlighted.

¹⁴ The universities can vary in their situation, environment, condition or academic climate.

The third research question looks at the relationship between indicators of academic productivity and indicators of implementation success of the National Educational Philosophy. In order to answer this question, two types of relationship are studied and represented here by the first and second sub-questions. First, the relationship between implementation success of the National Educational Philosophy and academics' productivity will be examined. This move will hopefully help the universities to revise their policies towards more improvement, especially in human resources development. Secondly, looking at the perspective of the professorial appointments, and relating them to the successful implementation of the NEP in HEI in this study, can highlight how effective the roles of the professors are, in productivity terms, in influencing the full implementation of each element of the NEP.

1.8. Limitations of the study

This study will not include academics in Medical and health related disciplines as they have different academic responsibilities in general. Among the disciplines excluded in this regard are Medicine, Dentistry, Veterinary Science, Allied Health Sciences¹⁵, etc. Among the differences that these faculties have from the others, in direct relation to academic responsibilities, are having a different yearly academic calendar, different systems of teaching and learning, and having many part-time academics whose main

¹⁵In the context of the National University of Malaysia, Allied Health Sciences include para-medical fields such as audiology, speech sciences, pharmacy, dietetics and optometry.

occupations are as medical, dental and health practitioners in hospitals, health centres and other organisations.

The academics selected for the research sample are limited to those working in public universities at the time of data collection, no matter what condition of appointment/tenure they hold (temporary, permanent, or contract), and no matter what current status they have (whether they are on study leave or sabbatical, for example). This study is limited to public universities, because their academics are more homogenous in respect of salary scale and terms of service than those in universities in the private sector, because different private institutions have their own staff policies.

In regard to part of the first research question, the academics will be asked to answer certain questions in the questionnaire about their own academic productivity. There are of course difficulties in getting data by self-report. The difficulties are, firstly, whether or not respondents are willing to answer, and, secondly, whether any answer they may give will tend towards self-praise. This is a limitation of this study in that data about these aspects is mainly gathered by using self-report.

In regard to another part of the first research question, namely the sub-question about what factors affect productivity, the academics in the sample were not asked directly what causes differences in their productivity. It was too difficult to ask this because, psychologically, most people do not know why they do things when asked to give their perspective introspectively (Abelson et al., 2004). This is the limitation. Therefore, the

researcher tried to answer this question by looking at the relationship between research productivity variables and other variables that have the potential to cause differences in productivity. A further limiting point affecting this study is that some academics will be reluctant to criticise other academics, and this has the implication that they may be less than totally honest in their responses, particularly to the questions concerning the proportion of deserving professors.

Lastly, the sample population of academics in this study does not come from all seventeen public universities that presently exist in Malaysia. Of all the universities, only UM, UKM, USM, UPSI, UMS and UNIMAS have been selected. These six universities are similar in terms of offering various faculties of study and a wide range of disciplines from the categories of science, technology, arts, social science and humanities. The other eleven universities are excluded because they have at least one very different characteristic that sets them apart within Malaysia. Examples of these situations include UiTM, for having a branch in nearly every state; UPM, for offering mostly agricultural related courses of study; UUM, for having only management related faculties; UTM, for offering mostly technology related courses of study; KUIM, for having only Islamic Studies related disciplines; UIA, for having many expatriate academics and undergraduate students; and all the university colleges for having a small number of students, hands-on orientation of study, being specific in their areas of study, and being very newly established.

1.9. Assumptions of the study

There are several basic assumptions embedded in this study. The first assumption is that the responses have been returned from a representative sample. In other words, they are assumed not to have become a biased group compared to those who have not responded. Responding participants can form a biased group if they are the only ones who are motivated by the research and will tend to give positive (or negative) responses, compared to those who do not respond.

Secondly, the academics being selected to participate in this study will receive the online survey questionnaires and are then assumed to respond to them honestly. Thirdly, having committed to giving honest answers, the target sample will therefore be assumed to be very confident that their returned questionnaires will be treated confidentially, even though they may be suspicious that the researcher may know in some way from whom each questionnaire has come.

Fourthly, all the individual academics are assumed to have received the e-mail message inviting them to participate in the online survey and to have access to the internet and usable e-mail during the study, or in other words, the email system was working at the time. Fifthly, that the email addresses of the academics that the researcher uses for this data collection are the ones that are used by them. Sixthly, it is assumed that the particular information about all the academics in the sampling frame (the information used as a basis to make a proper sample) which was gained from websites and other resources, was still true at the time when the sample was about to be formed, and kept on

being true throughout the data collection process. Unfortunately there is no way by which the researcher could estimate the extent to which this may or may not be the case.

Seventhly, it was assumed that each respondent academic chose the questionnaire version (English or Malay) based on which they felt more comfortable to use, not, for example, because they wanted to show off their ability in English. This would mean that they could provide some of the information but they would ignore other questions because they did not know how to express themselves correctly in English. Eighthly, when analysing the research data, all information will be treated equally, with each opinion carrying the same weight. For example, data from someone who is a dean in a small faculty in a university will be treated in the same way as data from, say, someone who is a dean in a large faculty in a different university.

Ninthly, it is assumed that there is no difference between work done by professors before and after their appointment as professors, in terms of quality and quantity. The assumption in this regard arises when academics are requested to give their perspective on how many professors deserve to be appointed to that position. However, when responding to this particular question, academics may relate the quality and quantity of work that the professors do at any time in general, especially after their appointment as professors. Therefore, in this case, it is assumed that whatever they have done (their productivity) before and after the appointment will be pretty similar because it results from their natural attitude. Even though this assumption really may not be fully justified, it has to be made or assumed here when the academics seem not to differentiate between how the professors have performed before and after appointment.

Lastly, in many cases of significant relationships between two variables, which can be either strong or weak, it is not always easy to identify which variable has caused another, as maybe some unidentified third variable has caused either of the two variables in question (Cohen & Manion, 1994). Cohen and Manion also added that any effort to make sure that a causal relationship is correctly interpreted lies chiefly in the researcher's ability to make judgements based on their explorations. The explorations can be, for example, in looking at past related studies or in the literature. It is assumed in this study that the researcher has got some basic knowledge to hand in trying to study relationships between variables and therefore any relationship value obtained here is assumed to be based on the right causal relationship.

CHAPTER 2

Literature Review

The different sections that form the basis of this thesis are outlined in this chapter. They are divided into four parts: academic productivity, NEP implementation, relationships between these two and the research constructs. The first part consists of seven sections, the second has five, the third just one and the fourth four, making a total of seventeen sections.

The first section looks at the concept of academic productivity. The second considers the academic career roles that constitute academic productivity, this mainly comprises teaching, research and administrative responsibilities. The third section concerns the current situation in Malaysia and why the present study of academic career roles is so relevant. The fourth, fifth and sixth sections are devoted to explorations of teaching, research and administrative roles. The seventh section concerns the extent to which productivity is the basis for the appointment of a professor.

Moving on to the second part of the chapter, the eighth section is on the philosophy of higher education, followed by the ninth on why the NEP in Malaysia is of practical importance, especially in the context of higher education. The tenth section is about the continuous improvement of higher education that requires elements related to productivity and the NEP. The eleventh section considers the positive and negative sides of political influence on the present system of universities, operating with regard to the NEP. The twelfth section examines why academics form a group that can reliably evaluate any aspect of higher education, including the NEP.

There is only one section in the third part of the chapter, the thirteenth section, which looks at relationships between academic productivity and NEP implementations. In the fourth part of the chapter, the fourteenth and fifteenth sections contain literature about research orientation and the variables used in this research, respectively. The sixteenth section is about issues related to the use of an online survey questionnaire as the main research method for data collection. The last section discusses possible ways to increase response rates.

The construction of each section is guided by the available literature. It is commonly understood that any available literature can act in three different ways: in providing empirical information to support the researcher's arguments, in constituting an authority, that the researcher can rely on, on any particular issue, and in introducing certain concepts that the researcher will use as a starting point to elaborate on in connection with the study Byram (1994). This concept of literature usage is generally adhered to in the writing of this chapter.

Part 1: Component of Academic Productivity

2.1. A review of academic productivity

The perspectives of academics on their careers are useful in order for this study to identify the factors that relate to academics' productivity. Productivity is about cost effectiveness or how much output there is compared to input. This definition originally

comes from the economic perspective and, based on this, productivity in higher education is defined as being increased when total output is purposely raised, qualitatively and quantitatively, to counter all the costs involved in the operation of certain HEI (Levin, 1991).

Economic factors are important in influencing people's activities in almost every country. In striving for a permanent, favourable economic situation, people in the United States have for the past few years sought to encourage economic development alongside initiatives to maximize higher education, so that the costs involved in the latter's operation are more than covered (Wayland, 1995). According to Wayland again, since then, everyone involved in teaching, research and administration at universities has felt under an obligation to successfully provide what the public requires from them, according to their respective roles. This is what is usually understood as the common process of achieving a high standard of a country's growth through encouraging academic productivity, even though this is not always what happens in practice. If we refer to Wolf (2002) as mentioned earlier in Chapter 1, she also stressed that it is not necessarily a prerequisite for everyone to have a specific academic qualification from a recognized university in order to develop a country successfully.

In considering academic productivity, the basic fact that we need to know is the kind of outcomes we seek from higher education (Wayland, 1995), even though there is no straightforward definition of academic productivity found in the literature (Reagan, 1985). The most important outcome is indicated by the extent to which higher education can transform any important identified natural state for the better (Wayland, 1995). This

target needs to be achieved to as high a level as possible, especially when there is research evidence indicating that the changes that have been brought about anywhere in HEI are only technical and are still far from being cultural changes (Spencer-Matthews, 2001). In conjunction with this need, the roles of the academics who can use their own initiative and creativity to convey knowledge (Larsen-Pusey, 1988) in HEI are of vital importance. It is therefore essential for knowledge production that these academics can subsequently increase their academic productivity.

2.2. Academic career roles

A number of studies of academic careers have been carried out recently in a variety of research settings. Some of these studies have been done across various fields of expertise {for example Nixon, (1996)}, some in the form of national studies {as conducted by Larsen-Pusey (1988)}, and some have even crossed national boundaries as shown by a comparative study of the attitudes and activities of the academic profession in fourteen countries, conducted by The Carnegie Foundation for the Advancement of Teaching (Altbach, 1996). This last study discussed how academics spend their time as well as looking at the level of their productivity in higher education and the organization of teaching, research and administration. Altbach and Lewis (1996) added that the data on academics' attitudes with regard to teaching, research and administration will further our understanding of academic work in higher education. The performance of higher education was then examined, mainly with regard to teaching, research and administration.

There have been various studies and pieces of research concerning how to divide academic roles in higher education into specific categories. This is because to study the productivity of these academics in any meaningful way necessitates defining their major roles. One such piece of research is again a very extensive study that has been made to compare academic activities and the level of productivity in teaching, research and administration in higher education in various countries (Altbach & Lewis, 1996). Even though nobody will come to a conclusion as to what standard career pattern could apply to all academics, there are common career elements for them that include the ability for continuous development in their teaching, a continuous effort in doing research in a particular field of expertise, and continuous improvement in terms of reputation and capability to contribute to the community through various administrative service activities (Taylor P.G, 1999). Levin (1991) proposed four categories of output in which an academic can excel in order to be productive. The categories are: teaching and instruction, research work, administrative duties within the university, and community valued-added services. However, in trying to arrive at a more precise professional identity for academics that is associated with their responsibilities, in Britain, for example, they have long been recognized as lecturers and researchers (Nixon, 1996).

Larsen-Pusey (1988) indicated that in North America academics have three basic roles which are teaching, research and administration. Research evidence shows that, from the academics' own point of view, their performance will easily be indicated in terms of their involvement in research, teaching and community service (Taylor J, 2001). On the other hand, in the context of the United Kingdom, academic careers have been

understood to include the five vitally important roles of networking, teaching, researching, writing and managing (Blaxter et al., 1998). When referring to the use of time by academic staff, Blaxter, Hughes et al. (1998) comes to the conclusion that networking comes under teaching or researching, and writing comes under researching, so there are then only three overall role categories, namely teaching, researching and managing. Community service is however not being lost here when we refer to what Blaxter, Hughes et al. say. The involvement of academics in the community, as required by the UK government in this case, seems also to be supported by Blaxter, Hughes et al. when looking in detail at the elements of networking and managing that he mentions.

Managing here is also understood as administrative activity, and about one-third of the academic workload is characterized as administration (Blaxter et al., 1998). Because Malaysian universities follow this scenario of the British system, the roles of Malaysian academics are also therefore divided specifically into teaching, research and administration (or what can also be understood as administration services). All these three key concepts of the academic role are important not only for the present-day people of Malaysia who are in need of higher education, but also indirectly for future Malaysian generations who will live in a more challenging developed country as planned by the government.

However, most of the literature on academics across different countries (not only in the United Kingdom as mentioned above) deals with outcomes in the aspects of teaching and research (Anton, 1996, Fulton, 1996, Postiglione, 1996, Sheehan & Welch, 1996). The researchers are less interested in other aspects because teaching and research are

always considered to be more important than administration or community service. A study by Drennan (2001) demonstrated that while research is widely perceived as the main route for career advancement in the academic world of higher education, teaching is to be given a value equal to that of research, but it is perceived more explicitly in terms of the recognition of excellent lecturers.

This means that academics may enjoy career advancement because their outstanding research makes the university administrators proud of them. However, they can be considered to be poor lecturers if their teaching is not beneficial when it is delivered in an uninspired way, such as not being kept up-to-date, for example. The reverse is true when lecturers whose teaching is superb cannot enjoy promotion if they have not carried out outstanding research. However, usually it is understood that both should come together for the benefit of all. In fact, today's universities in both Australia and the United Kingdom, while believing that, for the sake of achieving an acceptable standard of quality assurance, research activities are actually preferred because attainment levels are always more easily identified, are also working hard towards producing better graduates through providing a conducive teaching environment (Doring, 2002).

Another argument concerning research is that, apart from the requirement of easy identification of attainment levels, people should be able to see that research is indeed important for improving the quality of human knowledge, supporting university teaching so that it can be enhanced continuously, generating useful inventions and technology, and providing encouraging training opportunities for academics (Adams, 2000). Adams added that research evidence shows that research productivity in any field becomes one

aspect that the public always look at. A university is considered contributive when its research, because of its good quality, is referred to in positive terms by many innovators, technology exploiters and creators of knowledge elsewhere to advance technology and the body of knowledge (Scott, 2000). The increasing number of newly usable discoveries, strongly influential knowledge and highly trained personnel are among the important elements that any nation should have at its command when facing the very challenging situations that seem to be inevitable for the future (Lindsey, 1991).

No matter how far either of them approaches excellence, the existence of the roles of teaching and research within a university should always come together and be given as equal attention as possible because they are considered complementary (Ramsden, 1998). In line with this, a strong relationship between teaching and research activities is suggested by the results of the recent Teaching Quality Assessment and Research Assessment Exercise conducted in British universities (Drennan, 2001). However, these findings seem to contrast with the results of a meta-analysis conducted by Hattie and Marsh (1997) which concluded that, overall, there was no relationship between the quality of teaching and of research for all practical purposes.

Whatever the nature of the relationship is, the researcher wishes to show here that many studies have been carried out that look in particular at the relationship between teaching and research in universities. The evidence shows that, even though the relative importance of each and the relationships between them in the universities have been hotly contested, the claim that universities exist for both purposes seems to be undeniable (Hattie & Marsh, 1997). Generally, because both teaching and research play

their own part in producing and transferring knowledge, the establishment and existence of any higher education system will always rely on them, and if one of them fails the whole university can collapse (Rouban, 1989).

While teaching and research in the United States, the United Kingdom and some other developed countries such as Australia are world class and are always being used as the standard of reference by other countries¹⁶, in the developing countries, and particularly in Malaysia, the aim has been to achieve international standards in both of these functions¹⁷ (Bardaie, 2003). Bardaie added that Malaysian higher education needed to meet the demands of all the challenging and competitive international factors in order for it to contribute significantly to human development, knowledge exploration, and the creation of wealth and development for the country. By looking just at the research aspect in the United Kingdom, for example, there is an opinion that no matter what is the quantity of research activity conducted or produced in the universities in the UK, the overall research contribution will always be more significant compared to specialist institutions elsewhere, as most of the universities are excellent in international terms (Adams, 2000). Furthermore, according to Atkinson (1992), almost all basic research in the United Kingdom is conducted in universities, and this shows how highly people

¹⁶ The relevant example in the context of this study is Malaysia where every year a significant number of academics who work in public universities are sponsored by the government to undertake further studies (via the Public Service Department) under the In-Service Training Scheme (Public Service Department of Malaysia, 2004). The fact that the Malaysian government sponsors its academics in the UK, the US, Australia and others acts as an example of admiration. It is because the government wants the academics to be practically exposed to the system of teaching and research in those three countries in particular that they can use the exposure as a reference in the institution they are attached to when they come back.

¹⁷ There are some indicators that the standard of teaching and research in Malaysian higher education is below the international standard. One of them is the fact that some universities in Malaysia experience serious shortages in the number of Professors because academics there have no ability to produce quality research and publications (Reporting a Vice Chancellor's statement, 2004). This has happened for example in the Universiti Utara Malaysia (Northern University of Malaysia), which has been established for more than twenty years, having been founded in February 1984.

regard the universities for their reputation in research even though the industry, the other place where basic research could be carried out, could and might do a good job in the UK too. As there are many basic research studies that cover the United Kingdom, looking at their outcomes will also indirectly give a clear indication of the performance of higher education within an effective system.

On the other hand, in the United States during the period 1973-1979, the decrease in overall levels of publication in various fields indicated a surprisingly low level of research productivity among all disciplines (Fox, 1992). However, it has not taken long for the universities affected to get back on track, and even to get dramatically better while becoming widely recognized as world leaders in many disciplines (Smith, 1992). Without denying the high performance of academics in other disciplines, Smith gave as an example the work of academics in science and technology where, even in a period of intense industrial competition, they had been seen to be very successful. Malaysia should take this scenario as an important and valuable lesson¹⁸ - that nothing is impossible in seeking a massive upgrading of its higher education standards, especially in research. This should be attempted even during the current period of economic turmoil.

There are studies of the academic profession in the United States that look at how personal and institutional characteristics relate to the productivity of research and teaching (Fox, 1992, Larsen-Pusey, 1988). More specifically, with regard to publication

¹⁸ The lesson that the researcher means here is the possibility of achieving high research productivity in a short time, even with very limited resources.

productivity as part of research activities, personal traits and dispositions, when brought together positively, will increase academic productivity (Fox, 1983). In Malaysia, Ngah (2001) has made an exploratory study to examine which factors negatively or positively affect the research productivity of academic engineers and scientists. This research divided the affecting factors into two categories: the endogenous factors (such as personal, home and academic backgrounds, and individual attitudes that the academics can control and the exogenous factors (such as departmental and institutional variables that cannot be controlled by them.

Briefly, productivity in research, teaching and also administration are in fact becoming important performance indicators for Malaysian academics; therefore one of the purposes of this research is to find an explanation of what factors will relate significantly to productive teaching, research and administration.

2.3. Situations affecting the importance of academic career roles in Malaysia

There is indeed an emphasis laid by the academic departments in public universities in Malaysia on the need for academics to continuously improve their teaching, research initiatives and administration services in several ways, especially within the university itself. The requirement for them to attain a degree of excellence in all necessary respects is therefore very demanding. There are two situations that are closely related to this scenario in Malaysia.

First, there has been an expansion in the number of public universities in recent years. The new public universities have encouragingly been established in quick succession by the government. The government has justified this move by arguing that the establishment of these new universities is not political but in order to cope with current demand for as many trained and skilled employees as possible to fill employment vacancies (Din & Samsudin, 2004). The demand comes especially from the private working sectors in which there are many foreign investors. One way to keep them sustained in the country is to supply the demand for employees. The buoyant employment market is in line with the fast growth of development in Malaysia. It is also in line with Malaysia's motivated vision of becoming a fully developed country by the year 2020, as declared by the former Prime Minister of Malaysia, Dr. Mahathir Mohamad (Mahathir Mohamad, 1991, Milne & Mauzy, 1999).

However, people are still in doubt as to whether the public universities, regardless of their status of establishment, can really fulfil the requirements of industry for genuine expertise. If they are able to, why are there still many foreign experts being hired here? While their number is on the increase, the number of jobless Malaysian graduates is also increasing at the same time. The current number of Malaysian graduates who are jobless is at least 80,000. According to the government, a job exists for almost all of them but they are not competent enough. This is why the government wants to set up a short intensive training scheme to upgrade their capability as soon as possible (Jaafar, 2005, Zakaria, 2005). The significant number of foreign employees in Malaysia would be acceptable if the argument was that the universities are still in the process of meeting the demand for manpower, but when there are so many jobless Malaysian graduates around,

something must be wrong somewhere. The situation should in fact be the reverse, with the demand for qualified graduates being supplied from within the country. The system of public universities, especially as regards how productive the academics are, should be seriously examined under these circumstances.

It can be argued, and this is suggested by the government, that the formation of new universities to support the supply of manpower should focus on science and technology so that eventually all students in these disciplines, in all the universities, are targeted to secure all the available jobs because they are prospective candidates for meeting the market demand (Berita Harian, 2004b). However, this is not the case because in reality those who are from these so-called critical disciplines also form a significant percentage of the jobless graduates. In other disciplines, the level of unemployment is even higher. Although it is of course not always easy to know what skills are going to be needed by the economy several years hence, the current unemployment situation in Malaysia in any field can create tension among the people of Malaysia, employers, academic staff and students. In referring to these groups, it is fair to say that public money has been spent unproductively in the public universities. In addition, the results have not met the expectations of the employers who have invested in the country. They look to have enough competent local people in positions throughout the organization so that they are not significantly inconvenienced by having to bring in foreign expertise and face the problems involved in currency exchange regarding salary payments. Furthermore, the academics' reputation is affected because they seem to fail to produce high quality graduates. The graduates, on the other hand, experience the negative general perception that prejudice puts on them. To give an example, in a position involving technical skills,

perhaps the poor performance shown by previous technical graduates has created a negative perception; the non-technical graduates could subsequently be seen in an even worse light, although some of them are indeed very creative and critical.

In another scenario, while the government argues that because Malaysia has enough public universities to supply the demand for expertise and trained qualifiers in any sector in the country, the counter opinion is that even though the quantity of local graduates can more than meet future job demands, only those graduates with inherent quality will be employed and the rest will become jobless or self-employed. So, in the end, local public university graduates still cannot supply the highly demanding job market to a sufficient extent. This provides a ground for seeking solutions on how to make sure that the initiative of building up the new universities is worthwhile and properly carried out. After all, there is still an opinion that local graduates (especially from the newly established universities) have always been labelled by the job market as second-class graduates compared to those who have graduated abroad (Saprin, 2004).

When people in general look at this situation, their opinion is that the creation of the new universities is somehow a political strategy rather than a genuine attempt to meet current market needs. For them, building up as many new universities as possible is an acceptable practice for progressive nations seeking to foster the creation of a knowledge climate, but it has to be done once the new universities' pro tem management is ready, and also when sufficient funding is available. 'Ready' in this context entails high standard preparation in all aspects of teaching, research and administrative services as the three main activities in universities. Even though many people can accept that with

rapid expansion there will be mistakes and these are the acceptable price for rapid progress, there should also be adequate protection to avoid subsequent shortcomings and weaknesses resulting from poor planning of activities involving academics in universities. In following this plan, the improvement of academic roles that comes with the integration of teaching, researching and effective administration, because it will always involve the students, will then definitely upgrade and support the potential of graduate students. The students, regardless of their discipline of study, will eventually become versatile, adaptive, capable and excellent in all areas and these are the elements that young graduates should have in order for the country's vision to be realized. The academics need to be encouraged and monitored with regard to their involvement in the changes, otherwise the general quality of local graduates will remain the same.

In brief, if the changes take place, the students, based on their active learning and research experience (and subject to both being administered efficiently) will then suit many positions, roles and places in either the private or public sector of the workforce. Even if all employment positions were filled, the students could confidently take the initiative to set up their own businesses and then achieve success within them. Together, these graduates will bring the developed nation, which is now only a vision, into reality. Productive teaching, research and academic administration will greatly support the students as they start out.

However, the above thoughts, even if considered only in the context of Malaysian higher education, can be construed as not being absolutely realistic and practical. This is because they will be overruled by educationally liberalized concepts which say that

creating new higher learning institutions should be encouraged in any case. It is the full responsibility of the appointed university management team to produce competent students and to overcome any financial constraints in university operations rather than to put the burden on the government's shoulders. The government's allocation¹⁹ and direction is merely a supplement, not a basis that should always be relied upon. The universities must, for example, be creative and innovative so as to raise their funds by using any resources from the areas around the universities. These can come from organizations, research institutes, and corporate bodies. These parties will invest their money when they know that they can benefit in the foreseeable future from the universities' activities.

The symbiosis and win-win situation with the prospective funding bodies has to be presented attractively by the university management team with a very convincing working paper giving full details. In addition, the existence of a vast international academic network is another supporting factor. In this case, even the newly established universities will have the same opportunities and chances to excel as the older ones: they could even do better. Again, the realization of good teaching, researching and academic administration in the universities will only serve to justify these moves. Otherwise, all efforts of the management team, especially in the new universities, will be in vain, and will result in less support coming in.

The second situation that indicates the importance of academic career roles in Malaysia is that the Malaysian Ministry of Higher Learning was created in March 2004, which

¹⁹ All public universities in Malaysia are fully government owned and sponsored.

was a progressive move in the education sector in Malaysia. Such a ministry has been set up before in some other countries, but never in Malaysia. The background of its creation is of no importance here. However, the people of Malaysia are sure to agree that the formation of the ministry must be in line with the importance of higher learning itself.

The policy of the new ministry must be closely associated with efforts to improve the quality of academic roles, which becomes the core element in the universities' operation towards the main clients, who are the students. At the same time, the policy must also stress and concentrate on the development of the students (Abd. Rahman, 2004). The roles of both the students and the academics are actually of importance in making the universities run progressively. In fact, if careful thought is given to what should be done by the academics, the outcome will be shown in two ways. When academics perform their roles to their full potential, it will follow that the students will reflect the benefit of this. The students in different backgrounds need sufficient support from the academics while they are at university. The talents of the students may easily fade without guidance, but the talents of the academics can groom the potential of the students.

In other words, the setting up of the new ministry shows how important higher institutions are in the eyes of the government. But what is of utmost importance is the quality of the academics in undertaking their roles of teaching, research and administration. It is not merely a question of nurturing the students, because they are only the products that are continuously created year after year. The manufacturing process in the 'production houses' (the universities) could be of much greater

importance because ‘the machine’ for production (the academics) is there all the time to keep the production process running, and it therefore needs ‘continuous maintenance’ (continuous improvement of their roles).

There is no evidence to show that the formation of the new ministry was set up after extensive, thorough planning for higher education improvement. So, this research is important in order to supply some of the necessary information about the initial stage of the ministry’s creation. This initiative will also be in line with the ministry’s policy of encouraging this kind of research in support of efforts to raise the status of higher learning in the country.

The above two most recent pieces of background information about Malaysian higher learning confirm the importance for academics of continuously improving the quality of teaching, research and performing administrative tasks. However, this process is not as simple as might be expected. The ministry, by communicating with the universities, can lay down very good guidelines according to which the necessary activities can be carried out, but we must look at the possible conflicts that can arise. For example, what if the guidelines are good in theory, but actually do not support the academics? We can see this situation occurring when the management demands that the academics do what is required but do not provide the opportunities for making things happen. For example, lack of training, or too heavy a workload in certain academic roles, will create an imbalance of responsibilities and biased or unequal support across disciplines.

As far as the researcher can tell from his experience, the public universities in Malaysia are trying to follow the developed countries in their operations involving academics but do not have sufficient resources to do so. For example, the universities want their academic staff to make a significant number of high quality research studies. They urge the academic staff to carry them out on their own initiative but the staff are not provided with enough resources. The lack of resources can be in the form of limited funds, and insufficient teaching manpower which explains why academics have very limited time for research as they are too busy teaching. These are some of the obvious conflicts that administrators should resolve in order to rectify this situation. The academics' perspective (as sought in this research) on how to increase their availability and build up their motivation to contribute optimally to the academic world, must always be taken into account. After all, they are the people who are involved directly with all these issues, and who feel and experience them. From their professional perspective they know better than the administrators how they can contribute efficiently, especially as some of the administrators²⁰ have not previously been academics.

In order for Malaysia to become a developed country in about fifteen years time, it needs to be able to overcome any significant problems that may occur in higher education. This purports to be one of the reasons why the new Malaysian Ministry of Higher Learning was established, as it will deal with all the issues. The new ministry should not only focus on university students' development, as is thought by most people in the

²⁰ The administrators whom I mean here are not categorized as academic staff but their role in academic policy in higher learning is very significant. They will be the Registrars (and their officers), the Treasurers (and their officers) – in the universities themselves; and all the senior officials in the Higher Learning Ministry and the Malaysian Government itself.

country. The common understanding, that the 'Higher Learning Ministry is actually meant for the students to improve their quality', should be rejected. While this point of view holds true, the overall development in all areas of higher learning is more important in justifying the formation of the new ministry because the students themselves, as the main clients, will not realize their potential without the effective role of all academics and resources. Whatever its function, the formation of the new ministry is expected to be very relevant and timely in the context of present-day Malaysia.

Finally, if we look at the past, most of the research into higher learning in Malaysia has focused on students, and only a few studies have involved academics. Out of all of the research studies that have been carried out with regard to academics, none of them has looked comprehensively at the development of staff as to their teaching, researching or administration. This research is therefore very significant and timely in this context and will especially help the new ministry's policy makers to act accordingly.

2.4. The role of academic teaching

"There are difficulties in understanding faculty vis-à-vis their teaching due to the unclear nature of the products that result from teaching and which can be measured (equivalent to published research articles) and the inability of the faculty to obtain a consensus on what constitutes high-quality teaching" (Blackburn & Lawrence, 1995, page 177).

However, evaluation of teaching has been carried out continuously by several available methods, some of them well-established and others more newly created. The most commonly used recent method of evaluating teaching is by using student feedback. However, there is also research evidence saying that the use of student feedback questionnaires is not significant in the improvement of teaching and learning in HEI (Kember et al., 2002).

In relation to this, even though student evaluation of teaching dominates other types of evaluation in most universities nowadays (Ballantyne et al., 2000, Pozo-Muñoz et al., 2000, Saroyan & Amundsen, 2001), its validation can be argued about. Recent research supports this latter view by stating that students' evaluation of teaching can be influenced by a number of personal characteristics that could be connected to their perception of academic teaching²¹ (Shevlin et al., 2000). An example of these traits, according to Shevlin, Banyard et al., is the attitude of students within the institutional environment. Kwan (2000) quoted those researchers who are against student evaluation of teaching as saying that students are not mature enough to understand what academic teaching actually is. Moreover, their judgments are not fair to all academics when, for example, they tend to give higher ratings to those academics whose courses are lighter and in which high marks are easier to achieve. In addition, subjective teaching evaluation instruments, depending on different places and situations, can make the evaluation less relevant, and obscure or uncertain.

²¹ Because a student's evaluation of a specific lecture or class will be influenced by pre-existing views he/she may hold about the academic in question.

In contradiction with the previous 'no significance' arguments, a meta-analysis done by Cohen and McKeachie (1980) proved otherwise. This research showed that, on the whole, student evaluation made a significant contribution towards continuous improvement of teaching in universities. In a similar way, researchers who support student evaluation of teaching argue that, even though students could not be considered as experts in any particular subject in the university, because they have been exposed to various types of teaching, their descriptions of how effectively the subject is being taught can be taken as being reliable (Kwan, 2000).

In brief, while there is evidence to justify the necessity of student evaluation of teaching, there is other evidence to suggest that it should not be conducted. Conversely, while there are parties who make the criticism that evaluation of teaching should not be conducted by students as they have not been "called upon to apply what they have learned in further coursework or after graduation", research has suggested that student evaluation of teaching is in fact reliable, stable, valid, controllable in bias and very useful to university faculties and administrators (Marsh, 1994). It is therefore very informative when comparing the advantages and disadvantages of conducting student evaluation of teaching. Kwan (2000) stressed the importance of having student feedback, but at the same time agreed that this method is easily open to deficiency.

It is the case that a great deal of research literature on student evaluation of teaching is available, but, when one looks at the literature as a whole, much of it is concerned with reliability and validity in conducting the evaluation (Moses, 1988). The question of

whether the students or other parties can best evaluate academic teaching can then be compromised. It is when the teaching role itself is considered as coming from the integration of different aspects, each of which can be evaluated separately by different parties (Moses, 1988). Classroom presentation might best be evaluated by the students because they are always there, whereas peers, heads of department or the academics themselves can best evaluate the other teaching aspects (Murray, 1980). It is therefore important to look at other methods of evaluating teaching. The other common methods include in-class peer academics' evaluation, evaluation by heads of department, and self-evaluation, and all these undeniably also become part of a dynamic system of evaluating teaching in higher education.

In conjunction with this, there is a suggestion that student feedback questionnaires and peer evaluations should, together with other evaluation schemes, form a Teaching Evaluation Index (MacAlpine, 2001). MacAlpine added that the creation of this Evaluation Index could overcome any problems faced by any single individual evaluation method, especially student evaluation of teaching which is based solely on hearsay evidence. After all, it is unlikely that university administrators will pay much attention to student feedback rating results, however decisive, which are received on completion of each course. Even though the students are major clients of a university, giving their honest views on teaching in the belief that their contributions are very important, nobody in a position of power will in fact take much notice (Spencer & Schmelkin, 2002). In this respect, when looking specifically at the suggested Teaching Evaluation Index, when student evaluation is not fully accepted, the component of peer

evaluation seems to be important and more generally acceptable, even if it is used as a sole measure, and this is what this research suggests.

Moses (1988) says that peer review is common among professionals, including academics. Peers or colleagues can be relied on in evaluating university teaching because they understand the role so well and are therefore best qualified to evaluate, especially the basic aspects of teaching such as the construction and conducting of a whole course (Cohen & McKeachie, 1980). They can also evaluate teaching materials and the quality of tests; moreover they can be directly or indirectly involved in the processes involving the promotion and confirmation in position of other academics (Moses, 1988). Moses adds that the heads of department are also peers, besides being in a superior position to the staff in question, so the concept of peer evaluation is in fact even wider.

Some of the head of department are however of a lower academic rank, so the concept of evaluation by peers of a higher academic rank, but without direct management responsibility for the academics being evaluated, is another method of evaluation which is assumed to achieve a satisfactory outcome. The evaluation of professors by other professors and also other academics is another form of peer evaluation that promises to provide a number of important indicators. Besides peer evaluation, Moses (1988) quoted Seldin (1982) as saying that self-evaluation has been used widely to complement all the other types of evaluation.

The researcher can now say that, with the exception of evaluation of teaching by the students, almost all of the other forms of evaluation will be used in this research in order to ascertain the perspectives of the academics across all ranks and disciplines. They will give their views on other academics, who in this study are limited to the group of professors only. At the same time, self-evaluation is used a few times to indirectly provide information about the academics themselves. There might be a difference between what the academics are asked to do in the survey questionnaire and what they do in their departments, although both are forms of self-evaluation. In the questionnaire, they give opinions based on whatever information they happen to have in their minds at the time. In the context of evaluation in departments, the fact that they spend time specifically collecting information for the purpose of self-evaluation is clearly proven. However, it is assumed here that, in general, both kinds of self-evaluation will lead in the same direction and the differences will only be terms of magnitude. The analysis of the data will try to throw light on the extent to which there is an acceptable level of error. It is certainly the case that many researchers experience this kind of problem during data collection.

2.5. The role of carrying out research

As early as the late nineteenth century, universities devoted to research started to expand their activities to a considerable extent, in science, social science and the humanities (Altbach, 1996). This development indicated the beginning of conductive active research in many disciplines. The terms of research productivity and publication productivity are

always highlighted in literature either carrying the same domain or mentioning different things but closely complementing each other. There are problems with using publications as a measure of productivity when the quantity produced does not necessarily indicate the quality of the research, this being because some large-scale research studies take a long time to complete yet may result in a single publication, whilst another academic may have produced a larger number of publications had they been doing the research. So, in general, the quality and quantity of publications produced understandably act as indicators of research performance, but the practical value of the research is demonstrated by several components, the quantity of publications only being one of these (Fox, 1992). Even though they are not strictly equivalent, “research findings show that, in the aggregate, the correlation is high between the quantity of publications and the impact of academic research in science and social science” (Fox, 1992). However, it is certain that the two terms will mean the same to most people, namely research activity.

Research output, because it is readily measurable in order to easily impress people, is always associated nowadays by university academics and administrators with career advancement (MacAlpine, 2001). The assumption that research productivity will greatly affect future careers is supported by an argument that there are many ways to spread successful research locally and internationally, as compared to excellence in teaching and other academic roles (Blackburn & Lawrence, 1995). According to Blackburn and Lawrence, those academics who always publish their research are treated positively by their faculty, where they thus find tenure and promotion to be easy to acquire, while they also gain wider public recognition.

Several studies have looked at factors that affect research efficiency and productivity. Recent research in Malaysia by Ngah (2001) has explored in depth the factors related to academic research productivity. However, even though this study produced useful results by listing the significant factors, these factors have been correlated only for those academics in science and engineering disciplines. These two fields were grouped together, so any significant factors affecting science academics but not engineering, and vice versa, cannot be taken as a contribution to the assessment of Malaysian academic research as a whole. In obtaining academics' perspectives on performance indicators in higher education, as is to be done in this research, research findings showed that performance in any aspect of the academic world should be an aggregation of performance from as many disciplines as possible without excluding any of them, even though some seem less important in the current context (Taylor J, 2001).

The academics' perspective for evaluating the productivity of research varies as between self and peer evaluation. As self evaluation can sometimes be biased, peer evaluations, according to Jowett (1988), can be used as the best possible alternative for assessing the quality and quantity of research in higher education.

2.6. The role of providing administration service

Even though the career pattern for academic professionals vary, in general none of them can escape from the responsibilities of carrying out teaching and research duties, and

contributing to the community through various administrative service activities (Taylor P.G, 1999). Research evidence shows that, from the perspective of academics, the performance of academics is measured through their involvement in research, teaching and also community administration (Taylor J, 2001). The main roles of academics in the higher education setting can therefore be categorized here as teaching, doing research and administrating services to society.

As the teaching and research roles have been dealt with in some detail already, the administration service element of the academic's role will be touched on here. According to Blackburn and Lawrence (1995, page 222):

Administration service is the catchall name for everything that is neither teaching, research, nor scholarship. Performing "for the good of the organization" is one kind of administrative work. Meeting with a board committee, speaking to an alumni association gathering, arranging a visiting-lecturer series, sponsoring a student organization, entertaining advisors at your home – almost anything that casts the college in a favourable light among its many constituencies falls under the heading we call 'internal administrative service'.

According to Altbach (1996), the definition of the role of administration service by academics is wider when it is not limited only to paid work with an organization, or to any specific clients, either at the university or with any assigned committee, but it also covers any unpaid work, for any party who requires the service, even if it is located outside the university and even if doing it benefits just one individual. So, by taking all the above definitions into account, we can say here that any academic responsibilities that are not either teaching or research will be categorized under the role of

administration service. According to the definition of administration service to the community or society as given by Taylor P.G (1999) and Taylor J (2001), the community here is any group of people who are affected by the administration services provided by the academics. They can be outside the universities, or even inside the universities, and the community in the latter context therefore implies a wide range of people within any specific higher learning institution.

According to Wilkes (1968), all activities in institutions of higher education must be carried out by people because any intellectual centre requires a 'human brain' to maintain its function, and because of that we can say that the successful existence of HEI depends mainly on the context of a community of people. Wilkes also stressed that this kind of community comes in two forms: the academic community and the social community. Blaxter (1998) suggested that any administration or service task that has been assigned to academics is also usually meaningful and important within the higher learning community, and this makes responsible academics think that they should carry out their administrative duties as well as they can.

2.7. How productivity becomes a basis for the appointment of professors

How productive and effective professors are in performing their roles has nowadays become an important aspect to be assessed in higher education. People assume that professors are the most capable scholars, based on looking at their wide experience, exposure to knowledge, contribution to scholarship, and academic credibility and

productivity. While we should admit that the professors' existence in higher education and other places that use their expertise is vital, considering each of them individually to have all the above features is not always justified. The very positive perspective on them as an elite group could be examined by self and peer evaluation, the latter by other academics who know them well. The method of assessment by peer academics is appropriate for this exercise because peers understand their own context and what the intellectual benchmarks should be. Not everybody is able to perform this role, because of the special nature of the work. Too little research has been done so far looking at the performance of professors, and none at all in Malaysia, perhaps because this issue is a sensitive one as it can affect the credibility, reputation and image of a particular higher learning institution, and the whole higher education system of any country in general.

In this study, academics are expected to be able to give the most valid opinions²² on any intellectual production related aspect, including the reputation of higher education in terms of its daily operations setting and academic management; the academics' performance in teaching, research and administrative service; and even the performance of individual professors to a certain extent. Some academics in the sample of this research are professors, so these professors will also give their perspectives on the other professors, besides assessing themselves. It is commonly understood that in order to become a professor, one must have a doctoral or other higher degree, excellent quality in teaching, a high reputation for research and creative work, and to give significant service to society at large (Universiti Sains Malaysia, 2005); (Universiti Putra Malaysia, 2005);

²² In comparison with other group of people inside or outside the university.

(Michigan Technological University, 2001)²³; (The University of Alaska Southeast, 2003)²⁴. In addition, the professors will then need to maintain this excellence in whatever service and contribution they provide (College of Arts and Sciences, 1992)²⁵.

The academics' perspective in assessing the performance and effectiveness of Malaysian university professors is a type of peer assessment that is partially self assessment. Assessing Malaysian professors for their intellectual abilities is relevant in this country when there are rumours as to the existence of some professors who are not seen as perform as they should be. This is a terminology used for certain poor-quality university academics who will still get a professorship even though they do not deserve one.

The public feel unhappy about the existence of non-genuine academics who in effect are wasting taxpayers' money (Limey, 2003). Limey added that even the former Prime Minister of Malaysia, Dr. Mahathir Mohamed, once made some remarks on this matter towards the end of his period of office when he asked those professors who are not seen as perform as they should be to leave the public universities. This scenario shows how serious this problem is in the country and the need for it to be handled properly.

Therefore, the findings of this research, which is specifically about the perspective of academics on professors' productivity, related to the latters' deservedness to be appointed as professors, will in part be very useful in discovering whether this situation

^{23, 24, 25} These three are universities in North America. Even though the word Professor could mean something different there, for these references it is relevant as it is taken from their own procedures and guidelines for promotion specifically to the post of Professor in rank.

of the professors who are not seen as perform as they should be really exists. The academics are expected to give their honest opinions on this, based on the rationale that (i) if this reality exists, there are academics (some of them are also professors) who are not happy to stay silent about the existence of 'untrue professors' who hold positions of the highest academic rank, equivalent to or even higher than that of many 'true' professors; but (ii) if the situation does not exist, they can say nothing other than the truth; either way, their evidence will be viable and valuable.

The questions related to this seek opinions on what is the proportion of professors, in the university or faculty, that should have been appointed to professorship posts from the beginning. In the other section of the questionnaire, out of all the sample academics, the professors will also be asked to give their own perspectives about their productivity in carrying out their roles. By doing this, they may give themselves a more favourable report than is warranted. In other words, the professors provide an informative perspective, but when asked to assess themselves, they may judge themselves to be as good as people think, even though this is not necessarily the case. However, by also giving them the opportunity to peer-evaluate the other professors as stated in the questionnaire (when they are also evaluating how many of the professors are deserving of appointment) the bias in anyone's perspective, according to MacAlpine (2001), will to a large extent be counter-balanced by using this kind of measurement. The collective perspectives given by different academic ranks on the deservedness and capability of professors in public universities in Malaysia can give a reasonably reliable indicator of an academic's ability on the whole, and to some extent a clear indication of the quality control system of a particular university. This is because the professors are known and

understood to be the group of academics who can best represent all the outstanding academic activities in the university.

Part 2: NEP in the HEI

2.8. The philosophy of higher education

The concept of the philosophy of education comes from the integration of two main components which stem from views of how important education is to everybody, and the received wisdom on the purpose of education (Allen, 1988). To elaborate further, the concept of the philosophy of higher education has another component when considering what people think are the philosophical reasons for higher education and why it should be maintained. Different people will judge this in various ways based on their surroundings, exposure, knowledge and experience. Historically, the philosophy of higher education was one of the important concepts explored by the famous early philosophers (see below), and became the basis for the establishment of core operations in the universities, from day one of the universities' inception.

The present system of higher education was originally based upon the received wisdom of two Chinese Philosophers, Confucius and Lao-tse, and of the Western philosophers, Plato and Aristotle (Allen, 1988). Confucius and Plato had the same thoughts with regard to the concept that a knowledgeable individual should form the basic unit in any society anywhere; Lao-tse stressed the importance of continually producing highly

motivated individuals; and Aristotle emphasised the importance of collecting more theoretical, as opposed to practical, knowledge in order to avoid wasted plans (Allen, 1988). Allen (1988) considered some of these concepts, categorised as liberal arts philosophy, as being epistemological, and others, falling into the category of vocational philosophy, as being practical. Many writers describe the former as a theory of knowledge expressed in a classic and intellectual manner, meant particularly for the leaders of societies (Allen, 1988).

On the other hand, the second category is always referred to as that of pragmatic activity conducted in a practical or experimental way, as emphasized for the laymen or followers in any society (Allen, 1988). Whatever the terminology of the philosophy of higher education is, we cannot escape from the fact that it is subjectively rather than objectively prescriptive. This is because the concept of philosophy itself is very subjective as it is described depends on different wisdom. Furthermore, it has to be understood and grasped depending on the local situation, particularly in the context of a country.

In Malaysia, in particular, there is no specific philosophy of higher education at a national level that is applicable generally for any HEI, rather, each individual institution makes its own philosophy (Hussin, 2004). However, the NEP, as it covers all aspects of education in Malaysia, does logically apply to higher education. By adopting the NEP, HEI should produce graduates who are knowledgeable and competent, possess high moral standards, are responsible and capable of achieving a high level of personal well-being, and are able to contribute to the harmony and betterment of the family, society and the nation at large. Each individual student or academic, within a specific time

frame, will become balanced and harmonised in intellectual, spiritual, emotional and physical terms, and all these achievements should be based on a firm belief in and devotion to God.

Religious values, philosophically, can be closely related to all practical situations that are experienced by people (Minogue, 1973). The aspects of a high degree of intellectual, spiritual, emotional, and physical wellbeing should be achieved by all academics and students after spending a certain time at university. Therefore, the stress laid by the Malaysian NEP on intellectual, spiritual, emotional, and physical aspects, directly related to a religious or firm belief in and devotion to God, seem appropriate. In fact, according to Minogue again, the development of the academic world itself historically grew out from the existence of an attitude of piety.

The outstanding and unique features of the Malaysian NEP, along with the practical process of its implementation in higher education, can therefore play a dynamic role in further developing the potential of students and academics. The development, as realised in higher education, should be in terms of knowledge that is presented in a holistic and integrated manner for both academics and students.

2.9. Malaysian NEP: The importance of implementation

The NEP is expressed as, “Education in Malaysia is an on-going effort towards further developing the potential of individuals in a holistic and integrated manner, so as to

produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonic, based on a firm belief in and devotion to God. Such an effort is designed to produce Malaysian citizens who are knowledgeable and competent, who possess high moral standards and who are responsible and capable of achieving high levels of personal wellbeing as well as being able to contribute to the harmony and betterment of the family, society and the nation at large.”

This piece of philosophy can be seen as considering all the important elements in the context of Malaysia and then linking them to each other in translating the philosophy of modern education. According to Muhamad (2002), educational philosophy is of two types, labelled as pragmatic and idealistic. According to him, while the former is connected to the process of producing people who are highly capable of running any sector of the country in the near future, the latter emphasizes learning for the sake of furthering wisdom across all boundaries in creating a good community for all mankind. Among academics, knowledge about every particular element of the NEP and its background is a prerequisite for assessing the implementation of the NEP in HEI. The implementation should however be continuously assessed as it is always dynamic.

The method of implementation of the NEP should always be adapted to suit its application in any specific educational institution. Generally, any educational institution in any part of the world today is evolving over time, and this chaotic state really requires the provision of clear information (based on valid data) at all levels of the institutions (Tymms, 1990). The information gained from any institution will only become clear at the time when it is updated. The act of getting the perspective of academics on the extent

of the implementation and constraints of the NEP in HEI provides up-to-date information that will indirectly identify the strengths, weaknesses, effectiveness and current status of this implementation. Subsequently, continuous improvement in HEI can be realized. The process of continuous improvement is the main feature of maintaining quality in any organization (Hassan, 1999).

2.10. The context of the NEP and productivity in the Higher Education System in Malaysia

The Malaysian public university system should aim to reach international standards and be accepted by people at all levels. Ideally, a university should be continuously improved in all respects, including excellence in research, offering world-class courses, maintaining close ties with prospective employers, positively grooming its students to meet competitive marketable standards, running all operations using information technology, building up networking to international levels, and having a large number of quality staff (Taylor P.G, 1999).

What is considered here is the productivity of the higher education system, especially the interpretation of one's own productivity in the context of operating profitably by utilizing all available resources. However, from the perspective of developing Malaysia, the context of productivity in the higher education system should integrate other things as well. One of these is the NEP as an element of higher education. The NEP itself aims to further develop the potential of individuals, and to develop their knowledge in a

holistic and integrated manner for producing knowledgeable and competent individuals. Based on this, the output of higher education will be the production of graduates who have high moral standards, are responsible and who are capable of achieving a high level of personal well-being, and able to contribute to the harmony and betterment of the family, society and the nation at large. Finally, in addition, these individuals should be intellectually, spiritually, emotionally, and physically balanced and harmonized, all based on a firm belief in and devotion to God as the supreme power, as accepted by the majority of people in the Malaysian tradition.

All these features are among the important considerations in fulfilling the 2020 Vision for Malaysia becoming a Developed Country. Higher education is where many skilled technocrats, successful business managers (even though there are a number of very successful people, particularly business people, who have not been to university, but these are exceptional cases here), well versed administrators, and highly capable community and national leaders, will usually be produced. They are a group that the country will depend on for the sake of other citizens. According to Osman (2002, page 3):

“Until recently, at least in the case of this country, the university was a community of scholars, who in the pursuit of their own scholarly bent and interest, are respected and valued by their colleagues in other disciplines: the “serious” and “perceived difficult subjects” like medicine, engineering and pure science and the “not serious” disciplines like the social science, religious studies, language, culture and the arts”

Higher education is therefore establishing the process of continuously modernizing the Malaysian people. After all, the higher education system in Malaysia has dramatically expanded in recent years to serve more people and, at the same time, has emphasized the need to improve its quality despite the current well-maintained standard. This process started several decades ago, even as far back as the early eighties (Altbach, 1982). Altbach has proved that this achievement was already very convincing even at that time, so it is no wonder that, more than twenty years later, the process can be seen to be continuously improving, encouragingly and increasingly based on what the country has experienced in handling the impressive economic, knowledge, and information expansion that is also supported by the industrial and corporate sectors (Abdul Ghafar, 2004).

Examining the role of higher education mainly involves looking at the role of the academics. Productivity in higher education can now be defined as increasing when the output generated by the academics is continuously maintained in relation to their teaching, research and administrative roles. The output is generated through these academic roles by utilizing all available inputs. Monetary resources are one example of an input, provided in the form of certain budget allocations, given to the university, that will then be transformed into higher output value in the long term, when their good teaching produces students with versatile practical knowledge. Good research or discoveries of an international standard can then generate the income for the country and provide investments both directly and indirectly; and the important administrative roles of the university will from time to time contribute meaningfully to the academic world.

This systematic mechanism furthers the process of boosting the image of the university as an important knowledge provider.

Philosophically and theoretically, another important characteristic in the university system, when trying to ensure that it meets a very high standard, is that the system creates a homogeneous academic environment. An example of this suggested concept is to have no large gaps between the privileges of academics of different ranks, so as to avoid a capitalist approach. Also, when no obvious stratification in the universities, in terms of different treatment of various academic units, thus avoiding feelings of dissatisfaction, will result in a situation where all the academics of the same rank are homogenised in terms of their intellectual values and abilities (Scott, 1984). According to Scott, the academic profession, especially in some countries of the world where their higher education was influenced by British standards at inception, are always striving to have these kinds of ideal characteristics. Malaysia is one of those countries to which this applies, therefore the higher education environment in Malaysia should always contain the healthy characteristics listed above to ensure job satisfaction and harmony within the system.

2.11. To what extent can political influence affect the operation of the university in the process of implementing the NEP?

This section is included based on the common understanding that among the biggest and most significant problems faced by any educational administrators is that of dealing with conflict that involves political issues (Start, 2002). To look at how the NEP can be fully

implemented in HEI it is necessary to first examine the current running of policy and administration systems in the universities.

In Malaysia, all higher learning institutions are monitored by the federal government, which means that they are centrally controlled. The Ministry of Higher Education directly monitors all the institutions that are generally categorised as either Public Higher Learning Institutions or Private Higher Learning Institutions. Only Public Higher Learning Institutions became government-owned bodies²⁶ and are therefore fully funded, controlled and monitored by the government under the general policy covering financing, staff recruitment, promotion, curriculum, medium of instruction, and student intake. The law that set up this system was the Universities and Universities Colleges Act of 1971, amended in 1975 (Lim, 1995).

When comparing this system to that of higher education in developed countries, this kind of government ownership also existed in the former polytechnics of England and Wales²⁷, central institutions in Scotland, in continental Europe and many state-owned HEI in the United States (Scott, 1995). However, according to Scott, all of these institutions have their own autonomy in almost all aspects including the setting up of governance, dealing with any academic matters and the appointment of academic staff, with the exception of the executive head²⁸ of the university (the President in the U.S. or the Vice Chancellor in the U.K.). It has been understood and accepted for many years

²⁶ This means that not all higher institutions are owned by the government. Private higher institutions run on their own capacity, but subject to the government's control policy.

²⁷ All other U.K. universities are state-funded but not state-owned

²⁸ However, this practice does not apply universally across all the countries above, as for example in any university in Britain, including the ex-polytechnics, where the appointment of the executive head of the universities is totally in the hands of the universities themselves. However, extra care has to be taken at every possible step not to appoint any personnel who do not fulfill the required merit.

that the universities in developed countries should be dependent on the government for funding and the accreditation of all the awarded qualifications, but that they must exist as separate autonomous entities in running their operations (Ashby, 1967).

In Malaysia, there has long been concern over university autonomy. One piece of evidence that came from the interview with a former Education Minister was his worry about the possibility of some future government disturbing the universities' autonomy in terms, for example, of making their own plans and managing operations even though they remained funded by the government. In the real world, university autonomy in some countries has been rumoured and stated as being influenced by the government in a wide range of political ways, especially in several Third World countries (Coleman & Court, 1993), but also in some developed countries such as the U.K. (Seville & Tooley, 1997). This influence exists in some or all aspects of the universities' operations.

Parties involved in influencing a university's decision can include any outsider who has an interest, but mostly the reference is to politicians. In the countries where this is the case, dissatisfaction is spreading among those people who cannot accept this kind of interference. Even though it has long been a fact that political ideas are part of the basis for the existence of any university, the universities must be kept free from the involvement of politicians in order to maintain their integrity; and despite the fact that the universities are part of the state which is ruled by the politicians, they must preserve an independent identity as if they were apart from the state (Ashby, 1967). Research evidence shows that such interference, for example in not following open and agreed

procedures in appointments to academic positions, will downgrade the academics' sense of pride (Tight, 2002).

When considering its budget allocations to the universities, the government could lay down guidelines for conducting activities related to the use of that money, but it may not realise that academic freedom and professionalism can be eroded in some ways as a consequence (Lomas, 1993). According to Altbach (1982), any government that, based on its own judgment, instructs a university to reform its structures, accountability and management would be seen to be making a threat to the university's function whereby it should be able to set any policy freely. Altbach added that the threat to autonomy can create a different angle of pressure in higher education.

According to Lomas (1993), the power that the universities have is not genuine when they always have to struggle to implement any important policy, and this will eventually affect academic freedom as a whole. However, this context of academic freedom, manifested as resistance to government political involvement in university decision making, has in fact been contested over the years by the politicians themselves (Rochford, 2003). According to Barr (1993), intervention in higher education can usually be accepted in terms of regulation, provision and funding arrangements.

Intervention in provision occurs when the government treats the university sector just like any other of its departments, for example when some ministry official has been assigned to carry out the promotion process among the academics, while intervention in funding can happen directly or indirectly based on the purpose of the usage of the funds

(Tooley, 1997). Anyone who does not agree with any of these interferences may feel that an appointment to a senior academic post, for example, is now more politically motivated. The suspicion surrounding this kind of government interference is considered quite critical. For example, when there is an immediate vacancy for the top academic position, the thought uppermost in the minds of people in the universities will not be who is eyeing the position, but who is in the eye of the government (Tight, 2002).

In developed countries such as the United Kingdom, the issues, for example, of how the top university leaders are appointed, their current responsibilities, the roles they take in a period of budget constraint, and how to compare their duties to those of top people outside the higher education sector, are still relatively under-researched (Farnham & Jones, 1998). There is therefore plenty of room for future research on all these related issues. It is even more important to study these issues in the Malaysian academic context, as the country is developing rapidly in many critical sectors, including higher education.

This thesis partly intends to seek evidence on whether this entire question of the government influencing higher education is significantly affecting the operational system of higher education, and whether it could then possibly also indirectly affect the nation as a whole. This information is important in a country like Malaysia which has a good potential for rapidly improving its academic quality under supportive policies and a conducive environment (Altbach, 1982). Some of its policies are also used legally by the government to control the universities where appropriate, in accordance with its argued position.

Government influence may not have any significant effect on any of the academic situations in Malaysia, such as in the public universities. Even though there are some top academics who came to that position by means of a social and political process, as long as nobody questioned their intellectual work, the appointment was justified (Heward et al., 1997). Criticism from those who are not satisfied is becoming more common in a democratic country, but, as far as the researcher is concerned, there are not many academic writings that argue against those appointments, thus showing that such appointments are considered to be more or less acceptable by the academics and members of the higher education community in general.

No matter how they are appointed, academics can still produce outstanding research of international significance that is very useful technologically or socially. More interestingly, the situation of the government taking control measures could even be seen as the right move in order to create a healthy environment for research, teaching and administrative tasks in the universities. This is because there will not be much tendency towards campus unrest, which is threatening to all academic activities and resource funds; striking that is considered unproductive; and spreading of the feeling of dissatisfaction by word of mouth among the academics or students, which will then create unharmonious situations that can make the university less conducive to academic pursuits.

Academic freedom may bring disaster to a country when the people who are enjoying it can urge others to act in such an intimidating manner as to force the government to

accept their demands, and therefore create an uneasy environment throughout the country, which then can further generate provocative speeches. In addition, more people will feel victimized, hated and harassed (Rochford, 2003). Therefore, teaching, research and service administration productivity may significantly increase in line with the political involvement of the government. There are strategies to protect the academic's pursuit of knowledge in a successful university: one of them is to fight against and resolve the difficulties that arise, by using political pressure (Scott, 2000).

In addition, even in those developed countries that have excellent education systems, there are universities that do not have their own privileges. "Some universities in France and Germany are in fact government departments where the senior appointments are in the hands of the responsible minister; the state universities in the U.S. have boards of trustees, and some universities in the U.K. and Australia accept such controls by the government" (Ashby, 1967, page 7)²⁹.

In fact, the existence of political influence had begun as early as in the sixties in the U.S., and this was indicated by some academics who were actively involved in politics alongside their responsibilities and could not be prevented from doing so (Ross, 1976). According to Touraine (1974), the activities that these people were involved in included being political party activists and strategists or intellectual commentators on a range of political issues. Ross added that the scenario of the academics being actively involved in politics and then pulling the university into the political arena was in fact inconsistent

²⁹ Even though this reference is an old source to quote, the researcher wants to show that at least these developed countries have experienced government involvement in universities.

with the long tradition of non-partisanship in academic activities. However, up until recently, although political influence and involvement still existed and sometimes became considerable, the expansion of higher education seems not to have faced significant difficulties. It is evident that some political measures are needed in order to react to political interference in higher education, which can come from any government party, and should it come from the opposition the measures are even stronger. The argument to just accept that there is widespread political influence in the academic world was also supported by Shils (1973).

There were two types of university government existing in England in the early part of the nineteenth century based on autonomy in administering the university; the first where the academics themselves had full control of the universities and the other where the academics had less authority to make decisions concerning important matters (Ross, 1976). However, since that time, the existence of both types of governance system in these universities in the United Kingdom (with or without government interference) has been understood as not having any notable effect on the reputation of any university as far as academic excellence is concerned, judging by the increasing number of highly qualified students from all over the world who come to study and do research in U.K. universities.

This aspect can be examined here in this research by asking the academics to give their perspectives on what factors can contribute to the constraints on implementing the NEP in the universities. Even though it is open for the Malaysian academics in the sample to criticise the way the government influences policy when they react to the question about

what constraints the universities have in fully implementing the NEP, there may be some pros and cons in their comments to this influence and that is why the whole of this section has these two arguments complementing each other. Looking at the academics' perspectives on the government's influence on policy will be very valuable as they are generally accepted as the elite among Malaysians because of their intellectual ability.

2.12. Who should evaluate most aspects of the Higher Education system?

On the one hand, the academics' productivity can be examined by using their own perspective, and on the other hand, their perspective also constitutes an important method and approach in assessing any aspect of higher education, for example the implementation of the NEP. In an important research project carried out in Australian universities, the findings highlighted that it is a beneficial practice to ask the academics to give their opinions regularly on how to refine the measurements that indicate higher education performance (Taylor J, 2001). In the context of Malaysia, the successful implementation of the NEP is one of the national higher education performance indicators. Involving the academics in giving their views on how to improve HEI is beneficial to the institutions they are attached to as employees. In justifying this approach, we can relate to what Osborne and Gaebler (1992) have said, i.e., that anything to do with performance development in an organization, including the improvement of its indicators, should not always involve outsiders but the employees themselves, as they are the ones who know what is in the organization's best interests. The academics are employees of the HEI, which can be referred to as an organisation.

So, the perspective of an academic, whatever their rank, is therefore of importance when looking at the higher education system as a whole.

There is a research finding suggesting that academics of all ranks prefer to have access to various types of indicator from different angles when looking at the performance of higher education (Taylor J, 2001). In following this concept, the performance indicators in this research are not limited to those relating to any particular academic role, discipline of expertise, or rank of academic; therefore obtaining the academics' perspectives in the context of this study will allow for a comprehensive result to be obtained.

Every academic has his/her own perspective on how the university they belong to should perform effectively within the present system. The academics' perspectives in this context become collective and therefore important when considering all the individual universities which form a national system of higher education. The system of higher education needs to be continuously reviewed in order to fulfil the clients' requirements dynamically. The British government moved ahead in this respect in, to quote an early example, the formation of the Dearing Committee, whose main function was to monitor university operations, then give recommendations on how universities could be continuously reviewed in order for them to maintain excellence (Taylor P.G, 1999). It is pertinent that most of the committee members were academics with experience. Being at the foundation level of the process of evaluating higher education, this research will help to bring valuable perspectives to the agenda for developing quality systems in higher

education³⁰, as the perspectives are those of academics – the most important of all the significant parties in higher education.

Part 3: The Relationship between Academic Productivity and the NEP in HEI

This part is considered separately and concerns the research questions of this study. The first research question and its sub-questions are about academic productivity, whereas the second research question and its sub-questions are about the NEP in HEI. We can therefore see that there are two components being studied here, as presented by the first and the second research questions. In conjunction with this, a third research question arises, with sub-questions, looking at the relationship between these two components. That is why this part is necessary – to describe the relationship between these components in certain ways. Besides that, this part also mentions that the relationship can exist hypothetically, based on common sense. In addition, the researcher intends to make this study coherent by linking the two components together which was loosely, so that the issue is not seen as two separate studies. However, only one section is included here to explain all of it.

³⁰ Throughout the concept of quality here, quality elements should exist in any particular HEI, and, when they are integrated together, will then form a group of quality elements that exist in a higher education system. Changes usually come along this process, but research evidence says that changes always happen in technical aspects, whilst actually the real change culturally has been only on a small scale and accepted very little (Spencer-Matthews, 2001). By looking at the academics' perspectives on the basic aspects of higher education, we can conclude whether changes took place for the sake of achieving the quality system.

2.13. The description of the relationship

There are some indications that the successful implementation of any aspect of national policy encourages the increased productivity of academics, or it can be the other way round as a causal relationship in some circumstances. According to Berdahl (1990), academics are strongly opposed to the implementation of any policy concept that decreases academic freedom in British universities, one of the relevant policies being when the government wants strict control and monitoring of fund allocations for teaching, research and administration activities. In this context, the correlation between the implementation of national policies and academic productivity, if significant, will become negative when more implementation leads to the academics becoming less productive in their roles.

On the other hand, research evidence from China shows that the initiative of introducing policies for reforming higher education demanded more productivity on the part of academic staff (Cao, 1991). So, in this context, a certain level of academic productivity must first be achieved before the initiative of implementing certain urgent and effective national policies bears fruit. According to Cao again, academics have first to be more productive in order to cope with rapid expansion, newly introduced operating systems, the re-stressing of the importance of both teaching and research roles, and close ties or cooperation with outside enterprises for more practical exposure of students that will help economic development.

In the United States, achieving high productivity among academics in most HEI, especially in teaching and research, has always depended on the existence of a systematic organisational structure that involve policy making and practice (Finnegan, 1997). Finnegan stressed how important and timely this is for transforming existing policies that can affect the productivity of all the academic functions in those universities. This transformation, as it involves most HEIs, should be implemented at the national level for achieving coherent, concurrent or similar outcomes of changes throughout the country.

Besides the above arguments on the relationship that should exist between policy implementation and academic productivity, the relationship also seems to be being established as a result of using common sense. When there are policies that support the whole operational system in HEI, it is assumed that the productivity of any academic role will increase. Looked at the other way round, HEI in which most of the academics are highly productive in conducting their responsibilities should not face many difficulties with any policy that the country's authorities want to implement. It depends a lot on what kind of national policy is to be implemented. To confirm the expectation that any particular relationship will come into being, studies need to be conducted to seek the results of such implementations, this current study being an example.

Part 4: Literature on Research Constructs

2.14. The literature on research orientation

Generalization about higher education could not simply be based on any one academic stratum (Altbach, 1996). However, combining all the information and research from different academic angles will be very useful in making broad generalizations. Therefore, research on higher education needs to be more diverse over a period of time with a focus, for example, on different kinds of academic disciplines, ranks and institutions (Tight, 2002). In trying to put all the different research approaches into a study, the research that is now being conducted³¹ seems to be relevant and justified given that all academic ranks and disciplines, and public universities of different backgrounds, are included. Generalizations about higher education will then be improved after the data analysis is conducted. The research, even though it looks to be wide-ranging, will in fact focus on:

- i) determining the factors (from personal, institutional and environmental characteristics, and across all disciplines, academic ranks and universities) that are related to the performance of the academics in higher education, by looking at the outcomes: the roles of teaching, research and service administration productivity. These roles are also indirectly assessed on whether they have been assigned fairly among the different groups of academics, as without this practice it is suggested, from a research finding, that the academics will suffer from role

³¹The researcher is referring to the current research that he is doing.

conflict which is very stressful (Fisher, 1994). Fisher added that the only way to overcome this problem is to make sure that the roles are balanced in the way they are assigned. Hoping that the academics in this study will provide all the necessary information on higher education, including whether their roles are closely relevant to them, the authorities may find them very useful in encouraging improvement.

In a large-scale comparative research project conducted in fourteen countries by The Carnegie Foundation for the Advancement of Teaching, the roles of teaching, research and administration service were specifically assessed for the time allocation and productivity level of each of them (Altbach, 1996). So, to discuss the performance of HEI is to discuss the performance of their academics specifically in three roles – teaching, research and administration service.

- ii) getting the perspective of the academics on the level of implementation of the NEP in the higher education system, including some general constraints that can exist in regard to that. The overall performance of higher education can be indicated in various ways from the individual level to the institutional and even up to the national level (Taylor P.G, 1999). Even though, from the survey questionnaire, the respondents are expected to evaluate the implementation of the NEP as it affects individual students and academics, and give general comments at an institutional level, all the responses seen cumulatively will have a strong implication and impact at the national level.

2.15. The independent and dependent variables involved in this study

This section looks in particular at what issues are raised by the first research question of this study. The dependent variable, which is in conjunction with the first sub-question of the first research question, concerns the productivity measurement of the academics. In fact, numerous studies have been conducted looking at factors that affect academic productivity. The independent variables include gender, university attachment, marital status, number of family members living together, conditions of the present position (whether the academics are employed on a temporary, permanent, or contract basis), academic rank, highest degree possessed (and from which country and when obtained), field of expertise, relationship of this expertise with qualifications, how long in the field, how long in the university, experience outside, level of training received, number of organizations involved, perspective on discipline conduciveness, and also encouragement from the university environment.

Among these, gender is one of the variables that is important to look at when we are studying academic productivity. Research evidence shows that to put some limit either directly or indirectly on female academics, for example in appointing them to specific positions or classifying them into any category of discipline, will significantly affect their academic productivity (Gander, 1999). So, there may be a pattern on the effect of gender on academic productivity in the context of Malaysian culture. In addition, studying the distribution of gender in academic productivity becomes more relevant as the ratio of male to female academics in universities is now changing. The proportion of

women academics in HEI generally is increasing, and, by looking at the pattern of the progressively rising proportion of female undergraduates nowadays, it is not impossible that one day the number of female academics will outnumber the males and therefore they will shoulder most of the important tasks in the daily operation of HEI (Heward et al., 1997). In fact, the female undergraduate community that currently already greatly outnumbers the male has become one of the interesting issues currently being debated in Malaysia.

As regards the aspect of health, according to Hogarth (1987) the high productivity of academics in carrying out their roles is positively related to their good health, and this fact can be borne in mind by the university management so they can keep alert as to how best the academics can maintain their fitness. One way might be by allocating the academics a reasonable workload. However, even though this independent variable (health) was included in the questionnaire for the pilot study, it was subsequently dropped. This was done to make sure that the questionnaire became as shorter and simple as possible. After all, the response mean of 4.32 (of 1-5 scale, the goodly increasing in health for a higher scale) for this question on health indicated that, generally, all of them feel that they are in a very good health condition. This kind of data results does not bring much contribution to data analysis. Therefore all these specify as to why it did not include later in the main study questionnaire.

The purpose of studying the dependent variables is to be able to assess academic productivity. The idea of knowing the level of productivity in conducting academic functions can be used to explain what is happening in HEI in Malaysia with regard to

current academic activities. The research results may be able to explain how effective, prepared, capable and motivated academics are in teaching, how many publications and research projects have been done and what their values are, and the quantity and quality of administration service activities that have been undertaken by them. The measurement of the productivity scale comes from the perspective of the academics themselves, and when all the perspectives are brought together, the result is believed to contribute to the body of knowledge concerning the assessment of HEI in Malaysia.

2.16. Online surveys

The online procedure in conducting educational and social research is a new approach that should be widely recommended nowadays because it has become one of the fastest ways to collect survey data. This is because it can reach respondents in a matter of seconds, is cheaper with no travel and postal expenses, there is less tendency for the interviewers to be biased as the respondents are not facing them, and there are fewer chances of mistakes in keying-in the data for analysis as the researcher has the exact data in his hands (Williams, 2002). Furthermore, “participants are able to complete the whole process, from receiving the questionnaire to giving responses and posting back to the researcher, from the comfort of their own homes and at a time that suits them, and such factors may help to enhance response rates compared with, for example, a postal survey questionnaire” (Hewson et al., 2003, page 44).

It is believed that, historically, the use of any form of survey by social science and educational researchers as a modern scientific research methodology started as early as in 1909, and then it went through another phase several years later for some of the surveys to be integrated in the computer, which was therefore considered to a great improvement (Knapp & Kirk, 2003). The survey that involves the usage of computer was called a computer-based survey and was only intended for a survey conducted using a prepared questionnaire. This computer-based survey required the respondents to sit in front of the computer, and as computer technology was still not advanced, and in addition computers were rare at that time, this kind of survey was not popular. As time passed, the computer-based survey came to be inter-connected with e-mail technology as a medium in order to target a specific group of participants; in this way, the questionnaire becomes part of an e-mail message. The questionnaire then became more interactive and user friendly when it was created separately on the World Wide Web (www) on a specific server. This latest form of questionnaire is called an internet-based or online questionnaire, and with its specific link address on the internet, it can be sent via email to the prospective respondents by simply showing the link to be clicked on. The media of e-mail and online questionnaires are therefore being brought together in this research, so that each individual sample will get an e-mail message inviting them to complete the online questionnaire, reached via a URL³² link.

³² The 'URL' stands for Universal Resource Locator. This is a group of letters that begin for example with http, followed by a colon, double slashes, the computer's name, and the filename of a specific resource that becomes the universal address for an internet resource. Each resource on the Internet has a unique URL (Mailer, 1996).

Using the online questionnaire is a core procedure for data collection in this research. Because it has only been used in recent years, there were no studies looking at how effective it was compared to the long-established traditional paper-based questionnaire until one was carried out in 2002 by Truell, Bartlett II and Alexander (2002). The online computer-based survey questionnaire in this research has its own protective measure when used here: the skewing of a sample from the whole population can be avoided when those in the sample are selected following the stratified random sampling procedure. The survey sample therefore has minimal problems in representing the population at large. If there is still a problem over representation, it should only occur if some of the population do not have computers or do not answer emails. But generally, all the academics in Malaysia have been provided with their own computer, together with internet access. With regard to those who do not answer emails, this is an unavoidable error that occurs in many data collection within an identified sample population.

This research will use the HyperText Markup Language (HTML) for creating and then constructing the survey questionnaire on the web. The completed questionnaire will then be saved in a file. This is also the basic procedure for building up the elements of a website. By using this programming language, “standard form elements such as buttons, text input boxes, checkboxes and radio buttons, permitting a single selection from a range of options, are properly formatted so that they can also be used as discrete-interval rating scales” (Hewson et al., 2003, page 64). They added that the use of HTML-only web pages in the formation of a questionnaire can be very convenient, attractive and user-friendly to any individual who receives it by e-mail or through their own browsing.

Hewson, Yule, et. al. (2003) have given suggestions on some issues regarding the use of the internet in conducting survey research, and these suggestions have practical relevance to this study. First, there are respondents who usually open their internet browser with the main intention of viewing interesting websites and any incoming online survey questionnaires will either be ignored or treated half-heartedly if too long. To address this problem one can try to distract them with a short, simple, attractive and friendly questionnaire. Second, they advise that the construction of the survey should be guided by Information Technology experts to ensure impressiveness and attractiveness, and this is what the researcher has done by affiliating with the Information Technology Systems (ITS) centre of the University of Durham.

Third, even though the email addresses of respondents to the online questionnaire can become openly known in certain ways, they³³ quoted research evidence suggesting that anonymity is not a major concern to most respondents, although their research did not involve Malaysia. However, in further encouraging the respondents to trust the confidentiality of this study, the researcher can stress that this survey will be treated ethically and in strict confidentiality, but if a respondent still has some concerns over this, the researcher can also suggest that they can reply by using another person's email address³⁴, or the respondent could create a temporary email address. The respondents can be further reassured that these mechanisms should ensure total confidentiality as the researcher then has no way of recognising other e-mail addresses that do not exist on his

³³ 'they' here refers to Hewson, Yule, et. al. (2003)

³⁴ This can be done by forwarding the email from the researcher to the other email address before replying to the researcher.

list, while at the same time maintaining all the data given. The researcher may be able to guess if he wants, but it is a waste of time trying to guess³⁵ from a long list of samples.

2.16.1. Justifications and advantages of using online surveys

In comparing online and mail distributed surveys, Truell, Bartlett II and Alexander (2002, page 48) strongly indicated that:

“In nearly all cases in the past, e-mail or online distributed surveys have produced considerably lower rates of return than have mail distributed surveys”.

However, there is also research evidence in contrast to this showing that, between two groups of educational professionals who were randomly selected and were then given either a type of online survey questionnaire or a type of mailed paper-based survey questionnaire, the response rates of the two show no significant difference (Truell et al., 2002). This is therefore a very useful finding, even though past studies comparing different groups of people by looking at their response rates for online and paper-based mail surveys have shown differing results³⁶. This new evidence has been very useful for deciding to shift survey procedures from using paper-based mail only.

³⁵ The researcher knows that he won't convince everyone on this, because some "hidden" information can still be seen in a received email by using certain procedures.

³⁶ In other words, researches in the past showed that between these two approaches, online survey questionnaire always gained a lower response rate. However, the recent finding confirm that it is not always like that, when the online survey questionnaire did not become significantly lower in response rate (indicated by the no significant different). Maybe there will be some other researches to show that the online survey questionnaire will have a significantly higher responses in future.

A research study by Knapp and Kirk (2003) surveyed three random groups of undergraduate students who were given a self-administered survey in the form of either pencil and paper, automated touch-tone phones or internet-based, all of which used exactly the same items but were formatted accordingly, the results showing that there was no significant difference in the way the responses were given by any of the three methods. As the type of questions can be accepted and dealt with appropriately by students, academics can be assumed not to have any problems with them. This is the argument to relate student-based research findings to the academic-based research that is conducted here, where the use of any one of these three media, particularly the internet-based or online survey questionnaire, will not make a difference in the current context of the academic world. As has been mentioned above, using the online survey questionnaire is cheaper, faster and more interactive.

According to (Joinson & Buchanan, 2001), there is a considerable number of encouraging factors that can be associated with the effort to carry out online surveys in educational research projects, such as the ease in forming a large sample to help the researcher in obtaining sufficient data for analysis; the response can be returned in the shortest possible time electronically; the survey can easily reach targeted individuals anywhere in the world; almost no delivery and printing costs are involved except for the electricity and internet connection; and there is a more convincing anonymity in the eyes of the respondents that makes them willing to disclose more information. These arguments are supported by some other researchers' findings. Truell, Bartlett II and Alexander (2002), in their research conducted on a group of education professionals using internet-based and paper-mailed surveys concurrently to obtain their responses,

showed in their results that there was a significant difference between the response speed of internet-based and paper-mailed surveys where the speed of internet-based survey responses was significantly faster. The response speed for the online survey can be slower if the respondents tend to keep the survey questionnaire in their incoming e-mail box thinking that it can be completed later at their convenience, but research evidence here has proved that this did not happen.

In addition to that, their findings also proved that the response completeness³⁷ of online surveys was significantly higher than that of paper-mailed surveys. They then countered the latter finding by stating that this was not always true in the past, where some studies showed the reverse. The encouraging results on the completion of online surveys only happened on a few occasions, especially when the surveys were designed attractively and could be saved halfway through to allow the participants to continue completing them later on at their own convenience and leisure (Hewson et al., 1996).

There is an event where subjects are more likely to think that their response to the online survey located on the world wide web (www) has an advantage in maintaining their anonymity. They relate this to happen to the fact that in most cases there is no information stating where and who the responses come from in the completed and half-completed surveys that are returned, unless the respondents mention it somewhere, and this makes them feel free to answer honestly (Hewson et al., 1996). However, they added that there are examples of less honest answers that can occur when the

³⁷ Response completeness indicates to what extend the survey questionnaire is filled or completed; different with response rate that shows on the percentage of respondents in the sample who return the survey questionnaire.

respondents give their responses with the inclination to fulfil the researcher's preference or simply to follow what they think the most popular answer will be, and this is how they react in order to conform to what is expected of them (Hewson et al., 1996). According to Hewson, Laurent et al., even though a paper-based survey can also be anonymous to some extent when it is sent or passed around by hand without using any particular address, there will still be some doubt in the subject's mind as to how the researcher knew about them before sending out the survey.

2.16.2. Constraints on obtaining accurate information from online surveys

Even though Joinson and Buchanan (2001) are rather positive on the advantages that the online survey has for conducting educational research, they have also argued about the consequences of not obtaining the expected valid data when collecting it from participants who are either anxious about or expert in computer knowledge. For those who are anxious about computers, because of their lack of knowledge or even illiteracy in computer applications, software and hardware, they would not be able to deal with the online survey fully, whereas in the case of experts, because they can see beyond the appearance of the survey, such participants may not believe that their responses will be treated anonymously because they suspect the detection of their IP address in the www server's log files.

Inaccuracy in obtaining data can occur in any form of survey research. In the context of conducting this research online, there are worries that information in response to certain

questions may simply be fabricated, and this is dishonest behaviour that can happen with any academic survey. Knapp and Kirk (2003) gave their reason as to why this situation occurs under certain circumstances, when for example the subjects (i) think that the survey is not totally anonymous, where it can be disclosed to an interested party who can potentially bring harm to them; (ii) react by simply answering the questions in line with common academic norms to be on the safe side and not be seen as controversial; (iii) spontaneously react to questions which are too personal.

2.17. How to increase the response rate

Research evidence in general suggests that email survey response rates vary from 6 per cent to 75 per cent in different groups of people and research settings, but the percentage rates are distributed more on the lower side (see Hewson, C., Yule, P., et. al., 2003, p.82). A social science survey researcher will do his very best to find a solution to make sure that any survey being conducted will have a considerably higher response rate. In order to achieve this, factors that can encourage or discourage the response rate must be identified.

In considering a number of research studies over a forty-year period in various disciplines and orientations on how to increase response rates, Edwards, Roberts, et. al. (2002) conducted a meta-analysis combining all of them to obtain a general pattern of outcomes. Even though almost all of the research studies selected for the meta-analysis

were in the form of postal surveys, some that either have lower or higher response rates can be referred to when conducting an online survey that can also come in e-mail form.

In this regard, some of the research with low response results can be referred to first to identify what factors contributed to that situation. On the other hand, some strategies that are more likely to increase response rates can be seriously considered as to how to adapt them when using online survey questionnaires. From the meta-analysis by Edwards, Roberts, et. al. (2002), the aspects of length, contact, and content seems to be the most important factors to be considered in various types of study to increase the response rate, which is therefore also important when conducting an online survey. In considering these three factors respectively as regards the online survey questionnaire in particular, the questionnaire needs to be simple and short, sent with a brief polite message asking the respondents to fill in the questionnaire, and to be user-friendly but with strong contents.

Another aspect is the context of the study itself where, in terms of even using an online survey for example, there should be a sampling frame to be constructed first which contains the required personal details. The survey will therefore be conducted on a sample rather than simply sending it openly on the internet, which means that each individual in the sample needs to be systematically chosen. The questionnaire must also include a version in the local language, for example a Malay version, to avoid the respondents not answering because of feeling uncomfortable.

There are some other strategies for stimulating responses, particularly when conducting an online survey. One of them is the way the communication operates. In an initial welcome message, the researcher includes a specific deadline for the respondents to complete their responses by. The next step in the procedure is referring to what Brown (1998) has suggested, which is the necessity to send a reminder for responses that are slow in coming. Borg (1987) even suggested conducting at least two follow-ups of non-respondents in order to get a higher percentage response. This is why in this research, if there are many respondents who do not respond to the first message, the researcher will send a first reminder, and if there is still no reply, another reminder is to be given in the form of an appreciation message to all respondents that must also include a non-specific phrase such as 'to those who still wish to respond, they are always welcome'. At all three stages, the messages (the first welcome message and the next two reminders) need to go to the whole sample instead of to any specific respondents to maintain the anonymity of the survey data that has been promised earlier (Brown & Dowling, 1998).

CHAPTER 3

Research Methodology

3.1. Research design of pre main study

A full explanation, in chronological order, of what the researcher did before conducting the stages of the main study is summarised in Table 3.1 below. Before conducting a pilot study using an online questionnaire, the researcher looked into the literature on Malaysian higher education, particularly that referring to issues related to the professionalism of Malaysian academics. At the same time, informal telephone interviews were conducted with several Malaysian academics who were on study leave³⁸ in the U.K., to explore the major issues in Malaysian higher education. The Malaysian academics selected for this exercise were studying at Durham, Newcastle and Northumbria Universities. They were selected at random. The researcher, having clarified the issues, then refined the research questions and developed a questionnaire for the pilot study. The research questions were altered slightly to accommodate information obtained from the literature and from the interviews. This process is part of the grounded theory approach³⁹. This approach is in relation to any commitment, without being specific to any particular method or technique, towards the development of a theory. The pilot questionnaire was then prepared by using an online procedure on a website, whereby the respondents were able to respond promptly or at their convenience.

Two phases of the pilot study were conducted one after the other, using the same method, but with different questionnaires and people. The questionnaire used in the

³⁸ These Malaysian public university academics are in the U.K. to undertake further studies at postgraduate level, mostly doing doctoral degrees. They have been sent here by their universities (acting as government entities) under the human resource training scheme.

³⁹ The grounded theory approach was originally introduced by Glaser and Strauss (1967) who stressed that the process by which a theory is developed, even though it may not be rigid, must be properly treated.

second pilot study was the same as the first, but with some amendments, which had been made following the responses gathered from the first study. Both pilot studies were conducted on a small number of Malaysian academics who were on study leave in the United Kingdom. The respondents for each of the three methods were different, for the first telephone interview, the first pilot questionnaire and the second pilot questionnaire.

<ol style="list-style-type: none"> 1. Literature on Malaysian higher education (professionalism related issues) 2. Informal telephone interviews (Malaysian academics studying in the UK) - exploring related issues 3. Refining the research questions and developing a questionnaire for pilot study 4. Pilot 1: (questionnaire on website) – 15 responded. The sample questionnaire is shown in Appendix 2c and 2d (for both versions, Malay and English) 5. Some amendments made to the questionnaire 6. Pilot 2: (questionnaire on website) – 44 responded. The sample questionnaire is shown in Appendix 3c and 3d (for both versions, Malay and English) 7. Some amendments made to the questionnaire 8. Main study. The sample questionnaire is shown in Appendix 7a and 7b (for both versions), and so on

Table 3.1: Steps of data collection prior to main study

One of the methods used to make sure that the subjects really were different people was, when carrying out both pilot studies, to establish that the respondents lived in different

places. The pilot questionnaires were then sent by e-mail either directly to the academics, if the researcher had their e-mail addresses, or to be forwarded by friends of the researcher who lived in that area. The first pilot study was conducted on Malaysian academics who lived in Cranfield, Newcastle, and Bradford, of whom fifteen responded. Then the questionnaire was revised for use in the second phase of the pilot study. After that, the second pilot study was conducted on the reachable Malaysian academics who lived in other parts of the U.K., of whom forty-four responded. As well as answering the questionnaires, some of them also provided suggestions for changes in the spaces provided.

The two stages of the pilot study were the researcher's initiative. They were performed in order to solve any reliability and validity problems inherent in the questionnaire which was constructed earlier, and at the same time to explore any major issues related to academics' productivity and the National Educational Philosophy in Malaysia that could be added in or further considered in the questionnaire. In order for the questionnaire to be reliable, each question must ideally be understood in the same way by every respondent. This is also important to ensure that the questionnaire is valid. Each question in the questionnaire is considered valid when it is beyond doubt that it is measuring the right thing according to the relevant research objective.

At this point, the individual questions in the questionnaires might be changed after looking at the results from the pilot tests. Among some identified changes, the most prominent one was to remove unclear questions such as those asking to what extent the academics/respondents thought every RM100 of their salary would be of value in

benefiting people. This question was asked on three occasions, when referring to teaching, research and administration productivity. In asking this question, the researcher expected that the academics could estimate the value that their RM100 of salary would have attained, after 24 months, because of their productivity in each role of teaching, research and administration. The motive behind asking these questions was to get an idea of how far RM100, as an example, would have had value added to it in terms of the national effort in utilising resources. However the responses made it clear that the questions should be removed in order to make the questionnaire more reliable. The whole online survey questionnaire was then revised, simplified and finalised for the main study. The academics who participated in the pre-pilot telephone interviews, or in either of the two phases of pilot studies, did not take part again in the main study.

3.2. Main study – the items finally included in the questionnaire

The majority of the question items in the pilot questionnaires were retained, or were changed with only a few amendments to do with sentence structure. The final questionnaire that was submitted for the main study consisted of thirty-four question items that asked for sixty-eight responses from each academic in the sample. An example of the questionnaire is included in Appendix 7a and 7b for Malay and English version respectively. There are three major parts which form the questionnaire – background information, aspects of productivity measurement, and questions which ask about the implementation of the National Educational Philosophy (NEP) in Higher Education Institutions (HEI). The variables involved in the first part were: gender,

university attachment, marital status, family size, academic position, academic rank, final/highest degree, country where the highest degree was obtained, years since obtaining the degree, field of expertise, relation between the field and the degree, how long the academic has been in this field, length of current employment, length of other employment before becoming an academic, training quality, membership of professional organisations, career opportunities, and, finally, the university environment.

In the second part, on academic productivity, all data are based on any relevant activities over the past twenty-four months. It starts by asking for the percentage of time devoted to each of the academic roles. The examination of the academics' responsibilities in relation to the time they are allocated follows a recommendation by Mitchell and Rebne (1995). It is followed by a quantitative report measuring teaching, research, and administration productivity. For teaching, the number of courses, students taught and supervised, and also the level of the degree taught, become the basis. For research, the numbers of various types of publication in different categories are reported specifically, and, as the categories are subjective, following what Mitchell and Rebne (1995) have suggested, the total number of works that have been published is also requested. For administration, the academics are simply asked about the number of relevant prominent tasks they have handled or been assigned.

Even though we can see that the output details are mostly focussed on teaching and research aspects, which is in line with what Rhoades (2001) has suggested, the administration output indicators are also included. Academics, as opposed to students or any other group, are the only people who contribute to productivity processes that relate

to these roles. Subsequently, in question 23, the three academic roles are appraised and rated, while question 24 integrates peer-rated and self-rated data to assess aspects of productivity on the part of the professors.

The third part, on the NEP in HEI, starts with a question that focuses on the level of knowledge of the academics regarding the NEP as a whole. The next five questions, which require sixteen responses, represent the assessment of each element of the NEP using a Likert scale. Following this is a question asking the academics about the level of NEP implementation in general. To complement these questions, the next open-ended question focuses on constraints that may apply during the process of NEP implementation and that the academics want to highlight.

3.3. Main study research design

Prior to beginning the whole procedure of data collection for the main study, approval was sought from the University of Durham Ethics Advisory Committee. The committee gave the required approval in early February 2005. In addition, official letters were sent to the respective bodies in Malaysia, seeking their approval for this research to be conducted on Malaysian academics in Malaysia. One letter went to the Ministry of Higher Education to get the principal approval for the research to be conducted in any HEI in Malaysia (a copy of the letter is shown in Appendix 11). This application was approved in a letter from the Ministry, stating that they had no objection to the

researcher carrying on with the planned data collection (a copy of the letter is shown in Appendix 12).

Letters were also sent to the six selected universities in which the researcher wanted to carry out his data collection. An example of the letter is shown in Appendix 13. In this standard letter, the researcher requests three things: approval to conduct research in the particular university, the email addresses of a few academics, selected for the sample, that he could not get otherwise, and help in updating some online information about the academics. Two universities replied to this letter. UKM gave approval for the researcher to conduct data collection inside their establishment (as shown in Appendix 14). In another response, UPSI replied giving all that was required by the researcher (as shown in Appendix 15). The researcher had to send ahead in the other four universities in the absence of any response in order not to delay data collection as they were assumed would not response at all. However the principal approval has been obtained from the Ministry of Higher Education which cover on all the universities.

As a sampling frame for the study population, the researcher used an almost complete pre-prepared list containing the names of a total of 4,122 academics. The list covers almost all the academics in the six public universities in Malaysia. The list provides the names of the academics, their university, faculty and the smallest academic unit that they are attached to, their academic rank, any academic administrative responsibility, the sources from which the data was obtained (mostly websites), dates when the websites were accessed and last updated, telephone numbers, email addresses, and current academic status. The researcher obtained this list online from each individual academic

unit, using website links appearing on the homepages of the respective universities. As mentioned earlier the list may not be complete or totally accurate, but the researcher made every effort to compile the list (comprising the latest information) between 15th July, 2004 and 30th August, 2004, which is quite close to the period of data collection between 18th February, 2005 and 4th May, 2005.

However, those subjects who were known to have academic responsibilities that were primarily administrative were dropped off the list prior to the preparation of the sampling frame. This was because the study focussed on academics with a balanced proportion of teaching, research and administration responsibilities. Furthermore, when assessing responses to a section of the questionnaire concerning the percentage of administrative tasks that an academic was involved in, the figures for those academics who have mainly administrative roles would be larger and disproportionate, thus making the data analysis less valid. The academics in this category are usually those who hold top positions as university leaders, or are people who have been seconded to other government agencies aside from the universities, in order to utilise their expertise.

The detailed information held by the researcher for each academic may not be complete, but the researcher's main concern at this stage was to obtain email addresses, as these would be needed to conduct the main study. Some academics who were selected to participate in the sample did not have an email address on the list. Therefore the researcher first tried to get these addresses from the authorities of the universities concerned by using an official letter requesting a few items including the missing email

addresses, and this kind of letter and the response is as mentioned above in the second paragraph of this section.

Another practical way to gain missing information, including email addresses, was to ask for help from the researcher's friends who were attached to the respective universities. They are able to get the latest information by using their internal university network supplied by the university's Information Technology System team. This means that only those working in a particular university are able to access staff email addresses or telephone numbers by entering an assigned password. However, problems can occur when the particular registered email address is either no longer active or is not regularly used. It can also be a problem when the academic does not open his/her e-mail for a long time. It can be assumed that these problems are definitely going to happen during the course of this research, but they can be seen as minor and solved with little difficulty.

The researcher was able to make progress following the ethical committee's decision that the research could be conducted as long as it was done with full respect to confidentiality. The researcher could then prepare an email message, to be read by the respondents, directing them to click on a link that goes straight to the questionnaire. The link is included at the end of the e-mail message, and when somebody clicks on that link the questionnaire appears in their preferred format and in a state ready to be completed. In the message (which will also be mentioned later on in this section), the researcher stressed how it would be impossible for him to know where the submitted questionnaires came from. However, most of the academics (except maybe those who wanted to give some very sensitive responses) did not have any problem with their email address and

telephone number being used openly, as long as the information was the same as what was obtainable elsewhere on the internet, such as on the university website. They were also reassured that the researcher would only keep the information for his own use.

3.3.1. Determining sample size

The sample size needs to be controlled because it affects sampling error (Williams, 2002). It is always understood that the determination of the sample size is related to statistical power and effect size (Mohamed, 2001, Stevens, 1986). In addition, considering a suitable significance value is required in any statistical analysis. Therefore, there are four basic elements that should be considered before making any analysis of quantitative data obtained in any particular social research. These are effect size, significant value, statistical power and sample size.

3.3.1.1. Small effect size

The result of a 'difference between two groups' can become statistically significant at any magnitude of effect size, even though not all effect sizes are statistically significant. Effect size is defined as how big the difference is in standard deviation units. So, in determining the specific value for an effect size, the standard deviation of data of variables is needed (Coe, 2000). Usually, in order for a statistically significant result to happen, a small effect size needs to apply to a reasonably big sample size; and a big

effect size does not need a big sample size, as a small sample will be sufficient. It is common to find small or medium effect sizes in social science research (Mohamed, 2001). Therefore, it is conventional to act on the safe side and to assume that a small effect size will be found. The reason behind this is because one might easily find effect sizes that are small in one's research data or have more chances to do so, even though bigger effect sizes are preferred in general.

3.3.1.2. Significance level

It is important to set a level of significance for drawing a firm conclusion even though its value does not tell us the size of the effect size (Coe, 2000). The significance level here is then to be related to the sample size so as to be able to detect a small effect size. The significance level sets the risk of a Type I error, symbolised as α , which is to reject the true null hypothesis. In order to avoid Type I errors a low significance value has to be chosen. This is because, under the smaller value, a Type I error is less likely to occur.

3.3.1.3. Higher statistical power

However, the reduction of Type I error brings a tendency to increase the Type II error. These two error types happen in inverse or opposite directions. The control measure of the Type II error relates to what is defined by statistical power analysis, which means

that the fewer Type II errors there are, the more powerful is the statistical analysis, and therefore the two concepts should be quantified as opposites. Statistical power analysis is therefore denoted by $1 - \text{Type II error}$ (Mohamed, 2001). Therefore the higher the statistical power, the better the prevention of mistakes.

In other words, the Type II error value needs to be as low as possible. This error type happens when a false null hypothesis is accepted in any research conclusion. An example of an implication based on such a conclusion might be that the respective bodies would fail to change an educational policy, as they might think that nothing needed to be done. This conclusion could effect decisions up to the national level, and might involve a huge monetary expense. Therefore, a misjudgement in making an important decision brought about by not thinking of Type II errors could be very serious (Mohamed, 2001).

Cohen (1992) has suggested 0.8^{40} as an acceptable level of statistical power that can be used in any social research, although at first sight this would be considered to be high. Thus, in reference to Table 3.2, which has only two values of statistical power as an option, 0.7 should be chosen as the one that is closer to the highest value as suggested by Cohen (1992).

⁴⁰ This means that the research investigation has an 80% chance of finding a positive statistically significant result for a given significance level and a given effect size.

3.3.1.4. Sample size of 700

To explain simply, when considering all the above four elements - effect size, significance value, statistical power, and sample size - in this context, sample size is a function of the other three. This means that, by knowing the values of the three elements, the value of the sample size can easily be determined. As it stands, having chosen the values of the effect size, significance value and statistical power, the value of the sample size can be identified straight away, as provided in Table 3.2 below. The researcher will therefore simply pick up the value from the table, which is justified according to the above explanation. This table provides the effect sizes in categories – small, medium and large, of which the small category is chosen; the significance values, $p = 0.05$ and 0.10 , of which the smaller $p = 0.05$ is chosen; and the choice of statistical power value calculation, whether 0.7 or 0.5 , of which 0.7 is chosen.

Another thing to point out is that the minimum total sample size is therefore determined from the table as 620. It could go higher, if the statistical power determination is restricted, as suggested by Cohen (1992), to be 0.8 rather than 0.7 as used in Table 3.2. One of the elements contributing to higher statistical power is a larger sample size, as suggested by Stevens (1986). Therefore, it would be safe to round up the sample size from the calculations to 700 (which represents nearly 20% of the total population of 4,122).

This is the biggest sample size possible as suggested from the table. By having the sample size as large as possible like this, it would also become another safe way to

prevent a Type II error (as mentioned above) from happening, or to greatly reduce the chances of it occurring. This is because, even if there are many subjects in the sample that provide data tending towards the acceptance of the null hypothesis, there will still be quite a number (or percentage) of them left to provide data tending towards rejecting the null hypothesis.

As long as the sample size is large enough, even if the final results are non-significant, the research can still reduce the likelihood of Type II errors to a reasonable level. In brief, the bigger the sample size, the better. Thus, the researcher is free to use up to the value of 1,000, or even the whole population of 4,122, but it is practical in the context of this research to aim at 700.

	Small effect size		Medium effect size		Large effect size	
	Statistical power		Statistical power		Statistical power	
	0.7	0.5	0.7	0.5	0.7	0.5
Hypothesis test	N	N	N	N	N	N
Independent samples t test						
p = 0.05	620	386	100	64	40	26
p = 0.10	472	272	76	44	30	18
Related samples t test (matching variable r = 0.7)						
p = 0.05	188	118	32	22	14	10
p = 0.10	144	84	24	16	10	8
Related samples t test (matching variable r = 0.5)						
p = 0.05	310	194	52	32	22	14
p = 0.10	238	138	40	24	16	10

Table 3.2: Suggestion of minimum sample sizes with p = either the 0.05 or 0.10 level of significance and with statistical power at either the 0.7 or 0.5 level (Source: adapted from Table 5.3 on p 189 of: Gall, Borg et al. (1996). *Educational Research: An Introduction*. 6th Ed. New York: Longman)

3.3.2. The formation of sample population

A sample population unit would then be formed by using stratified random sampling with three strata, to represent as closely as possible the academic population as in the sampling frame. This can then represent the population of public university academics in Malaysia (because the sampling frame includes almost all the academics in six universities, and the universities have first been selected from among all seventeen public universities in the country)⁴¹. The first criterion would be the number of years that the university has been established, divided into three categories⁴². The second criterion would be whether the academics belong to a pure science related discipline, or another. The third criterion would be the rank of the academics, whether professors, associate professors, lecturers or tutors/teachers. The model used in forming this sample unit is shown in Table 3.3.

⁴¹ Briefly, the process was started by identifying the seventeen public universities, then narrowing them down to only six to be studied, then listing all the academics in the six universities, there being 4,122 of them altogether. The three criteria of the stratified random sampling technique are then applied to the academics to form a sample for this research.

⁴² In justifying why this criterion is chosen as a stratum, long established universities logically and commonly have more facilities and human and technical resources than newer ones, and the academics employed by them can consider all this when giving their perspective about academic productivity and NEP implementation in HEI. The researcher can consider using 'the university' as a stratum instead, which will have six categories for the six universities, but if this is the case, Table 3.3 will be more complex to produce, particularly as regards the number of cells.

	Universities with less than 10 years of establishment (<10)		Universities between 10- 20 years of establishment (10-20)		Universities with more than 20 years of establishment (>20)	
Pure Science related disciplines (Sc.)	P	<i>a</i>	P	<i>i</i>	P	<i>q</i>
	A	<i>b</i>	A	<i>j</i>	A	<i>r</i>
	L	<i>c</i>	L	<i>k</i>	L	<i>s</i>
	T	<i>d</i>	T	<i>l</i>	T	<i>t</i>
Arts, Social Sciences and Humanities disciplines (non-Sc)	P	<i>e</i>	P	<i>m</i>	P	<i>u</i>
	A	<i>f</i>	A	<i>n</i>	A	<i>v</i>
	L	<i>g</i>	L	<i>o</i>	L	<i>w</i>
	T	<i>h</i>	T	<i>p</i>	T	<i>x</i>

Note:

P = Professor

A = Associate Professor

L = Lecturer (including Senior Lecturer)

T = Tutor or Teacher

Table 3.3: Model which forms the sample population in this study, using three criteria in the stratified random sampling procedure (there are therefore nine categories and a total of twenty-four cells to be created.)

In each of the cells, which are labelled from a to x in the respective boxes, the academics included would be rearranged in descending alphabetical order according to their names, before assigning each of them with a number starting at one. At the end, each member of the population (in the sampling frame) would have a different identity by referring to them according to each of the three criteria that they belong to and the number assigned in each cell. For example, all academics in box a would share the same characteristics, namely those of being a professor in a pure science related discipline and attached to a university that has been established for less than 10 years. However, they would still be identifiable from each other because of the numbers assigned to them. From the total number of 4,122 academics in the population (as in the sampling frame), the researcher would first identify what percentage of them should go in each cell, as represented from a to x . Following this percentage pattern exactly, the same percentage in each cell should also be applied to form the research sample. The way academics are selected from each cell to form the sample is by using a random sampling technique that refers to a Table of Random Numbers. For the purpose of this research, the table used is as suggested by Borg (1983) and a copy of it, as an example, is attached in Appendix 16.

The sample size has finally been identified as 700. Therefore, by applying the percentages as discussed above, the size of each cell can be found in order to arrive at the whole sample of 700 academics. The detailed calculations of this are explained in Tables 3.4, 3.5 and 3.6 below.

Universities	Number of academics	Years since establishment
Universiti Malaya (UM)	1011	42 (Category '>20')
Universiti Sains Malaysia (USM)	846	35 (Category '>20')
Universiti Kebangsaan Malaysia (UKM)	1172	34 (Category '>20')
Universiti Malaysia Sarawak (UNIMAS)	351	12 (Category '10-20')
Universiti Malaysia Sabah (UMS)	376	10 (Category '10-20')
Universiti Pendidikan Sultan Idris (UPSI)	370	7 (Category '<10')

Table 3.4: The Malaysian public universities selected for this study, total number of academics in them and the length of time the universities have been established.

		Universities with less than 10 years of establishment (<10)	Universities between 10- 20 years of establishment (10-20)	Universities with more than 20 years of establishment (>20)		
		370	727	3025		
Pure science related disciplines (Sc.) 2026	P	<i>a</i> 6	P	<i>i</i> 20	P	<i>q</i> 217
	A	<i>b</i> 10	A	<i>j</i> 47	A	<i>r</i> 435
	L	<i>c</i> 84	L	<i>k</i> 213	L	<i>s</i> 761
	T	<i>d</i> 23	T	<i>l</i> 44	T	<i>t</i> 166
Arts, social sciences and humanities disciplines (non-Sc) 2096	P	<i>e</i> 12	P	<i>m</i> 12	P	<i>u</i> 98
	A	<i>f</i> 15	A	<i>n</i> 23	A	<i>v</i> 260
	L	<i>g</i> 177	L	<i>o</i> 311	L	<i>w</i> 995
	T	<i>h</i> 43	T	<i>p</i> 57	T	<i>x</i> 93

Table 3.5: Number of academics in each cell (*a* to *x*) from a total of 4,122 in the population (referring to the sampling frame)

Cell	Number of academics in population	Proportion of population	% of population, y	No. of academics in the sample (y*700) - accurate	No. of academics in the sample (y*700) – round number
a	6	0.001456	0.14556	1.018923	1
b	10	0.002426	0.242601	1.698205	2
c	84	0.020378	2.037846	14.26492	14
d	23	0.00558	0.557982	3.905871	4
e	12	0.002911	0.291121	2.037846	2
f	15	0.003639	0.363901	2.547307	3
g	177	0.04294	4.294032	30.05822	30
h	43	0.010432	1.043183	7.30228	7
i	20	0.004852	0.485201	3.39641	3
j	47	0.011402	1.140223	7.981562	8
k	213	0.051674	5.167394	36.17176	36
l	44	0.010674	1.067443	7.472101	7
m	12	0.002911	0.291121	2.037846	2
n	23	0.00558	0.557982	3.905871	4
o	311	0.075449	7.544881	52.81417	53
p	57	0.013828	1.382824	9.679767	10
q	217	0.052644	5.264435	36.85104	37
r	435	0.105531	10.55313	73.87191	74
s	761	0.184619	18.46191	129.2334	129
t	166	0.040272	4.027171	28.1902	28
u	98	0.023775	2.377487	16.64241	17
v	260	0.063076	6.307618	44.15332	44
w	995	0.241388	24.13877	168.9714	169
x	93	0.022562	2.256186	15.7933	16
Total	4122	1	100	700	698
				In making the sample size up to 700	+ 2

Table 3.6: Calculation used to devise the selected sample in conjunction with the proportion of the population. The number of representatives that should be in each cell of the sample is shown in the last column.

Once an academic was sampled, he or she was then removed from the population to make sure that he or she would not be selected for a second time. Another safeguard that

was used followed Frey's dictum that, "proper sampling will not allow substitution to replace a refusal by someone originally selected to be done" (Frey, 1983, page 9). Frey added that as the substitute may not reflect the full characteristics of the original respondent, substitution would therefore increase the response bias and lead to sampling error.

3.3.3. The process of data collection

During the process of collecting the online survey questionnaire data, three email messages were sent out, one after the other, prompting the academics to answer the questionnaire. The first email message requested them to respond to the given questionnaire (as shown in Appendix 4a and 4b), the second email message was an appeal to those who had not yet responded to do so (as shown in Appendix 5a and 5b), and the third one thanked everybody for their participation as well as urging those who had not yet replied to do so (this message is shown in Appendix 6a and 6b). All these messages were in Malay and were sent to the whole sample. This procedure of sending messages to the whole sample was done to maintain anonymity, which was presumably the respondents' main concern. It was also done because anyone who responded to any of the three messages was also kept anonymous, no details of the respondents being sent with any e-mail sent to the researcher, so they could not be identified. As there was no way of telling who had already responded, the whole sample had to be sent all three e-mail messages.

The first two email messages contained the links to open the questionnaires in both optional versions (the questionnaires in different versions are shown in Appendix 7a and 7b), the participant information sheet in both versions (as in Appendix 8a and 8b), and also the link to open an optional consent form (the consent form is shown in Appendix 9). Giving the respondents an option to fill in the consent form is part of the requirement set up by Durham University Ethics Committee in order for this research to be conducted. To prevent the respondents becoming bored with repeated links to documents, the third message (the thanking/appreciation message) does not include links to open the consent form or the participant information sheet. Instead, it includes the link:

http://www.dur.ac.uk/aminuddin.hassan/Results_of_the_Survey.htm. This link goes to the summary results of the survey that would be put on the web starting from 30th September 2005 and kept there for six months. A short message promising the respondent that the summary results will be available online from September 30th is included in the third message. It is part of an initiative to encourage responses. The summary results are relevant to the whole thesis, as they offer important general remarks, given in brief, for the whole process of data collection. The summary results are shown in Appendix 10. However, the researcher has no way to know on how many people looked at the link showing the results. This is because the results are presented online for everybody to look at and not providing any feature for giving response.

3.4. Uniform/common procedures and rules at different stages of this research

The respondents to the online survey questionnaire, either in the pilot stage or the main study, were able to respond promptly online. (These two study stages will be referred to as such for the rest of this section). In addition, at each stage, in order to increase the response rate, after the questionnaire had been sent out to all the sampled academics and some of them had replied, at least one reminder was sent to those who had not yet done so (as explained above, these reminders were also sent to respondents, for the reasons given)

The survey questionnaires at both stages were provided in both an English and Malay language version, depending on the preferences of the respondents. Including a Malay version meant that all the academics used in the sample, especially those who were trained locally, could choose the language in which they felt most comfortable for expressing their opinions.

CHAPTER 4

Analysis of Quantitative Data

In this chapter, we consider the analysis of the quantitative data and information gathered from the online questionnaire which is presented in three forms. The first, a statistical report of the responses; the second, a description of data on the personal profile, academic background and productivity of respondents. The third, an analysis of the quantitative data findings which will include almost all of the information gained in the questionnaire.

4.1. Statistical report of the responses

The questionnaire, conducted through online procedure to the 700 academics in the sample, resulted in a total of 345 responses. As shown in Table 4.1, this number was reached after conducting the survey in three stages in which each academic received three different messages at different times. The first message took the form of a request, the second an appeal and the third indicated appreciation.

700 Academics in the sample				
	After first request	After appeal	After indication of appreciation	
Period of waiting for responses/ (Days taken)	17/02/05 - 06/03/05 (about 16 days)	07/03/05 - 29/03/05 (about 20 days)	30/03/05 - 05/05/05 (about 35 days)	Total
Numbers of responses	77	232	36	345
Percent of responses	22.32	67.25	10.43	100

Table 4.1: Gross number of responses to the questionnaire at different stages in the procedure.

The figure of 345 included some responses that had been submitted twice because the respondents clicked twice on the submit button, blank responses, and responses which were not meant to answer the questionnaire, but, instead, the submission of consent form which shared the same email inbox folder. The table was then refined (Table 4.2 below) to include only the exact number of those who responded, referred to here as the number of valid cases, together with the remaining academics who had not responded, for the purpose of comparing frequency and percentage. The previous table is useful as it demonstrates the process of filtering the responses.

	700 Academics in the sample					
	Valid Responses				No response	Total
	After first request	After appeal	After indication of appreciation	Total		
Period of waiting for responses/ (Days taken)	17/02/05 - 06/03/05 (16 days)	07/03/05 - 29/03/05 (20 days)	30/03/05 - 05/05/05 (35 days)			
Numbers of responses	69	196	32	297	403	700
Percentage	9.86	28.00	4.57	42.43	57.57	100
Valid percentage	23.23	65.99	10.77	100		

Table 4.2: Number of valid responses (after refinement) at different stages in the procedure of collecting online questionnaires compared to the total number of academics in the sample

A total of 297 academics contributed to the result of the questionnaire, giving a response rate of 42.43%. The lowish response rate here is assumed to be because pressure of work may have left the academics little time to deal with email, or because they did not consider the email message sent by the researcher to be important to them. They may not have received the emails, some of the email addresses were possibly out of date, or it could have been that some computer systems in some universities were not working well.

One more reason could be assumed in looking at the response pattern, which was divided equally between those who responded to the Malay or the English version of the questionnaire. Logically, there should have been more responses to the Malay version, so this 50-50 response pattern may indicate that there were quite a number of academics who would have been more comfortable responding in Malay but did not do so. They may have intended to use the English version as proficiency in English would add to their status as an academic, but, daunted, they failed to respond.

By not having all these constraint factors, the response rate may have been higher, but to get such a response rate can be considered encouraging. It could have been less. After all, in quoting from the published literature, even though the percentage response rates to online survey questionnaire methods (through e-mail and/or web) are undeniably inconsistent, varying from as low as 19% up to as high as 72%, in most cases it was on the low side and less than that achieved in postal mail surveys compared like for like (Andreson & Gansneder, 1995, Bachmann et al., 1999, Kittleson, 1995, Opperman, 1995, Schaefer & Dillman, 1998, Sheehan, 2001, Yun & Trumbo, 2000). There is other

research in line with this, for example, as conducted by Schuldt and Totten (1994), and Swoboda et al. (1997) with online response rates of 19% and 21% respectively. In addition, there was a meta-data study comprising 199 online surveys with 523,790 respondents across private and public sectors, which used special research software and concluded that an average survey response rate was 32.52% (Hamilton, 2005). Furthermore, other meta-analyses, studying response rates to 68 internet-based surveys conducted by Cook et al., (2000) resulted in a mean response rate of 39.6% which was considered relatively low.

It was not easy to achieve the response rate of 42.43% obtained in this study. It is not high although thorough procedures were adhered to in conducting the three stages of data collection, and colleagues in the respective universities gave a hand wherever possible. The three stage procedure seemed to work quite well when, after the first message, which brought a response rate of 9.86%, there was a dramatic increase of another 28% after the second message. The cumulative 37.86% response was very encouraging. At this point, the academics may have thought that the data was vital to the researcher, which was why another message was sent begging for more responses to the questionnaire. In the third stage, instead of sending another reminder or begging message, a message of appreciation was sent, thanking everyone for their responses and promising to put the results of the survey on the web sometime in September 2005. A note added that if anyone still wished to complete the questionnaire, it would be welcome. This message brought a further response of 4.57%.

4.2. The description of data

It is useful to identify the statistical personal profile or academic background of the respondents before proceeding to relate them to the other variables. The description and explanation in this section will be based on the information provided in response to each question in the questionnaire, but only the variables that are thought relevant and needing further explanation will be covered here.

A brief description of the rest of the variables is shown in the summary of all data obtained from the questionnaire in Appendix 10. This appendix describes in brief the percentages of the 297 responses which went to the answer categories of each variable in the questionnaire. If the variable does not come in the form of categories, the mean and standard deviation value is shown. In addition, the frequency of non responses is shown for each variable. Some questions in the questionnaire such as questions 1 to 18, have single variables but others contain more. Question 21, for example, has 8 variables representing the elements of research productivity.

4.2.1. Personal profile of the respondents

Information in relation to gender is shown in Table 4.3 below. We see little difference in the numbers of males and females who responded to the questionnaire. Only one academic did not indicate his or her sex.

		No. of responses	Percentage
Valid	Male	142	47.8
	Female	154	51.9
	Total	296	99.7
Missing	System	1	0.3
Total		297	100

Table 4.3: Responses in relation to gender

The marital status of the respondents is shown in Table 4.4. Most of the respondents, about 82%, are married, 16% are single, and 2% are widowed, with only one academic not indicating their marital status.

		No. of responses	Percentage
Valid	Married	243	81.8
	Single	47	15.8
	Widow	6	2.0
	Total	296	99.7
Missing	System	1	0.3
Total		297	100

Table 4.4: Responses in relation to marital status

4.2.2. Academic backgrounds of the respondents

The research sample was selected using the stratified random sampling procedure. Three levels of strata were used, length of university establishment (<10, 10-20, >20), academic discipline and academic rank.

In referring to the first strata, length of university establishment (in three categories), Table 4.5 and Figure 4.5 below (based on Tables 3.4, 3.5 and 3.6 in Chapter 3) show the breakdown of responses of the 4,122 academics in the sampling frame, a theoretical sample of 700, and a valid response group of 296. In each case, responses from those in universities established for more than 20 years greatly outnumbered those in the other two categories. They were followed by those from universities of 10 to 20 years establishment, the lowest response rate being from those in universities established for less than 10 years.

Length of university establishment	Number of academics			Valid responses (The percentage of theoretical sample – of 62.83, 123.46 and 513.71)
	Sampling frame	Theoretical sample	No. of valid responses	
<10 years	370	62.83	47	74.8
10-20 years	727	123.46	54	43.7
>20 years	3025	513.71	195	38.0
Total	4122	700	296 (1 missing)	

Table 4.5: Responses in relation to length of university establishment

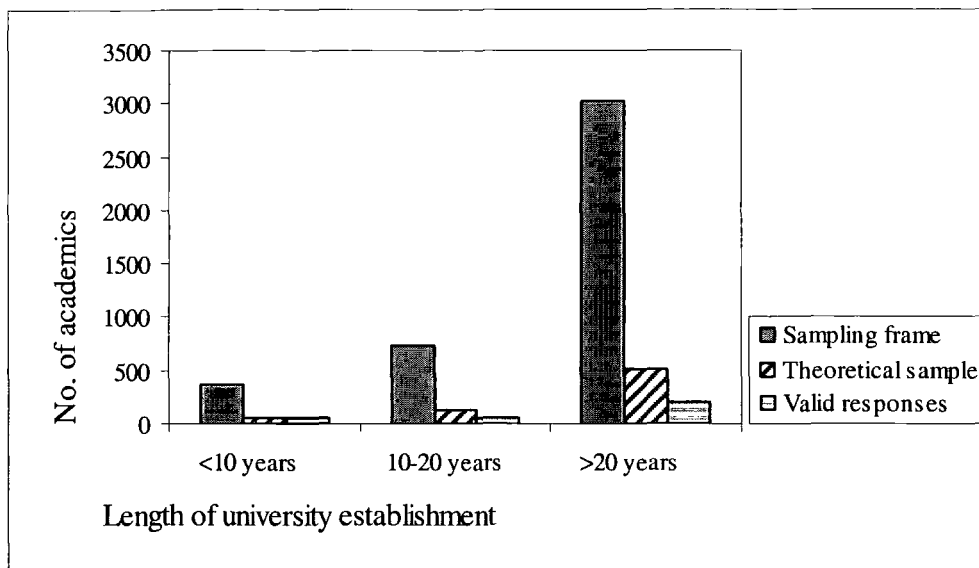


Figure 4.5: Responses in relation to length of university establishment

More detail can be extracted from the above figure by looking at the valid responses from each of the six participating universities. Table 4.6 and Figure 4.6 below, illustrate the number of responses from the individual universities, in relation to the length of their establishment and shows a similar pattern when compared to the responses in the category of university length of establishment, by referring to the cumulative percentage. It is not strange to find UKM to be the university with the most responses, but the excellent response rate from UPSI was very encouraging.

	University	No. of responses	Percentage
Valid	UM (>20)	49	16.5
	USM (>20)	45	15.2
	UKM (>20)	101	34.0
	U'MAS (10-20)	26	8.8
	UMS (10-20)	28	9.4
	UPSI (<10)	47	15.8
	Total	296	99.7
Missing	KUKUM	1	0.3
Total		297	100

Table 4.6: Responses in relation to each of the six universities

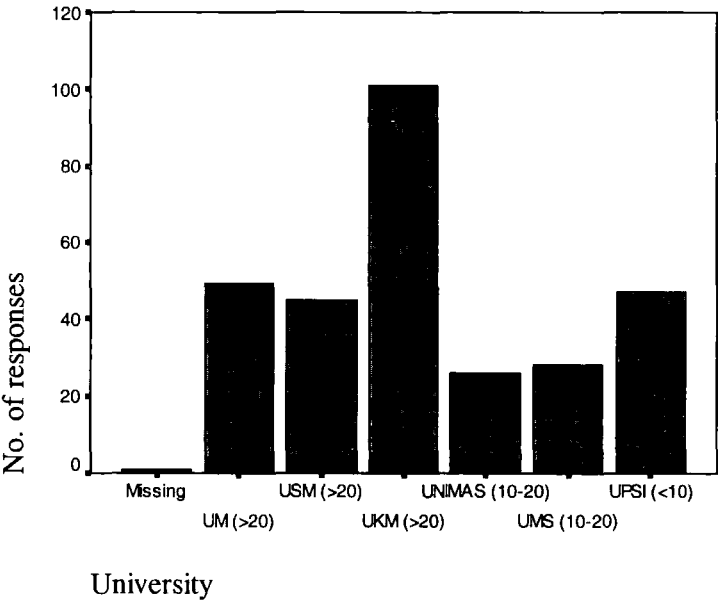


Figure 4.6: Responses in relation to each of the six universities

Table 4.7 and Figure 4.7 below compare the number of responses from academics in pure science and non science related disciplines. All responses were classified into the two categories. Comparing the number of responses, 126 and 166 respectively, with those of the sampling frame, the number of responses in the two categories have about the same ratio as the ones in the sampling frame, 2026 and 2096 respectively.

	Disciplines	No. of responses	Percentage	The percentage of theoretical sample (of 343 and 357)
Valid	Pure science related	126	42.4	36.7
	Non science related	166	55.9	46.5
	Total	292	98.3	
Missing	System	5	1.7	
Total		297	100	

Table 4.7: Responses in relation to academic discipline

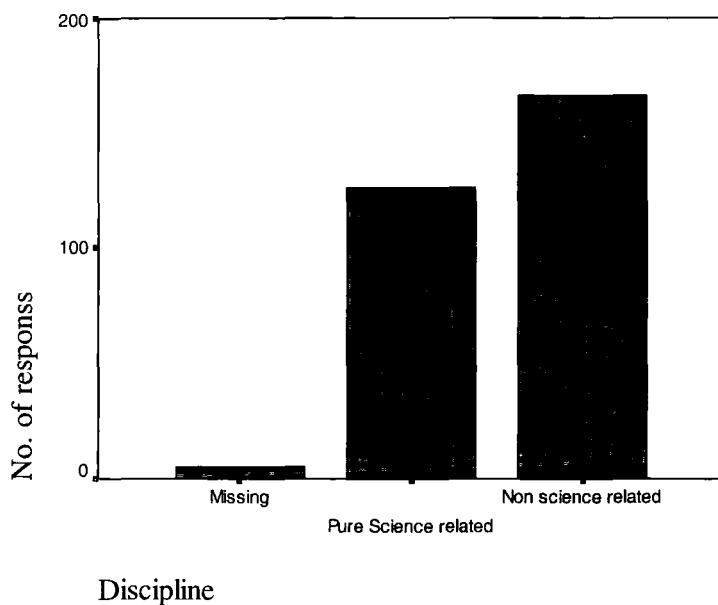


Figure 4.7: Responses in relation to academic discipline

Table 4.8 and Figure 4.8 below provide information on response according to academic rank. Lecturers were the biggest group to respond, followed by associate professors, then tutors or teachers, senior lecturers, and, lastly, professors. This pattern is as expected as it closely follows the pattern in the sampling frame. Creating them into five categories rather than four, as when forming up the stratified sample, seemed advisable. If there had been only four, the category of lecturer would have become higher as the number of lecturers and senior lecturers would have been integrated.

	Rank	No. of responses	Percentage	The percentage of theoretical sample (of 72, 431, 135 and 62)
Valid	Tutor/Teacher	29	9.8	40.3
	Lecturer	159	53.5	43.4
	Senior Lecturer	28	9.4	
	Associate Professor	58	19.5	43.0
	Professor	23	7.7	37.1
	Total	297	100	

Table 4.8: Responses in relation to academic rank

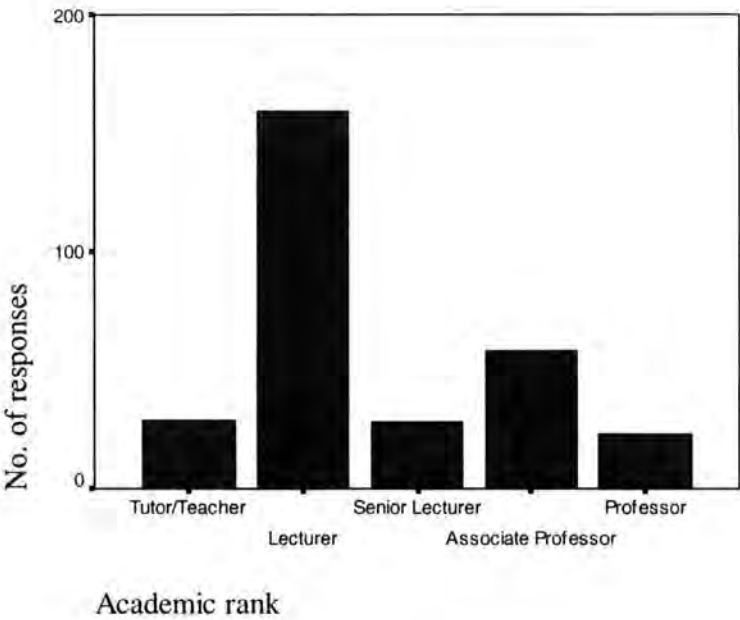


Figure 4.8: Responses in relation to academic rank

In terms of qualification, as shown in Table 4.9 and Figure 4.9 below, the highest number of academics to respond had a Master's degree. The number of those possessing

a doctorate was surprisingly close to those who had a Master's. As expected, very few had only a first degree and they would probably be tutors and teachers within the universities.

	Highest degree	No. of responses	Percentage
Valid	Bachelor	16	5.4
	Master	162	54.6
	Doctor	117	39.4
	Total	295	99.3
Missing	System	2	0.7
Total		297	100

Table 4.9: Responses in relation to academic qualification

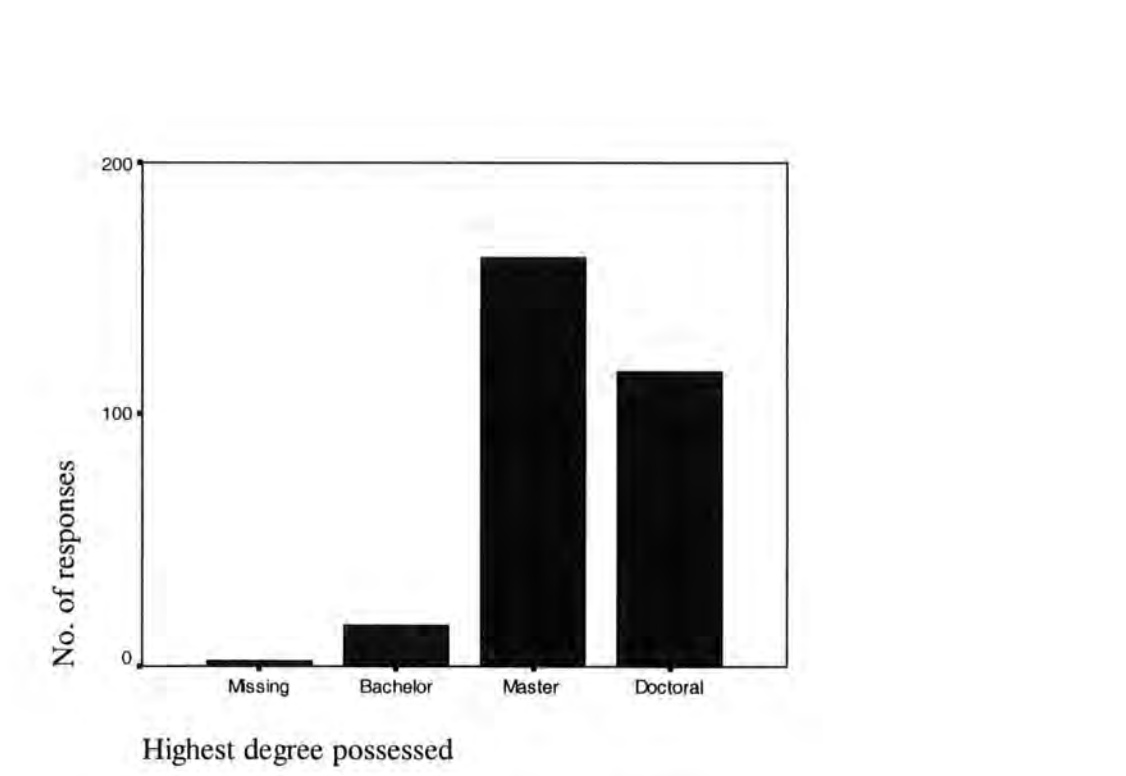


Figure 4.9: Responses in relation to academic qualification

4.2.3. Academic productivity

Regarding productivity, the three academic roles of teaching, research and administration have been considered in relation to other variables, however, only self rated role productivity and productivity relating to professorship will be reported here. Other indicators of productivity will be discussed in depth in the next section.

Table 4.10 shows the description of self rated teaching productivity data, in reference to the response distribution. Figure 4.10 then shows the distribution.

N	Minimum	Maximum	Mean	Std. deviation	Skewness	Skewness std. error
284	3	10	8.24	1.39	-0.67	0.14

Table 4.10: Data description of self rated teaching productivity (1-10 scale)

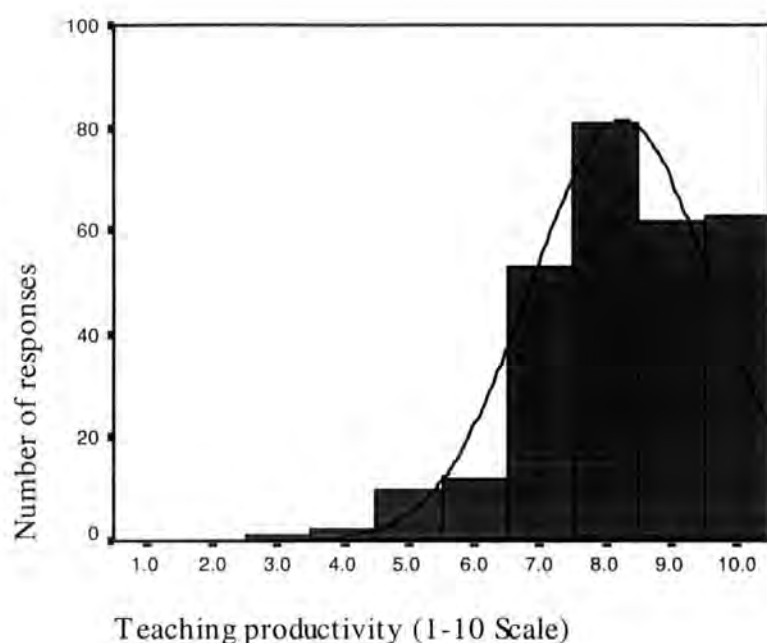


Figure 4.10: Distribution of self-rated teaching productivity

The distribution of the above data on teaching productivity is negatively skewed with a skewness value of -0.67 which is relatively high. Mean productivity is shown here as 8.24 on a scale of 1 to 10 in ascending order. Many academics rated their teaching as highly productive.

Table 4.11 shows the description of self rated research productivity data, in reference to the response distribution. Figure 4.11 then shows the distribution.

N	Minimum	Maximum	Mean	Std. deviation	Skewness	Skewness std. error
284	1	10	6.02	2.33	-0.28	0.14

Table 4.11: Data description of self-rated research productivity (1-10 scale)

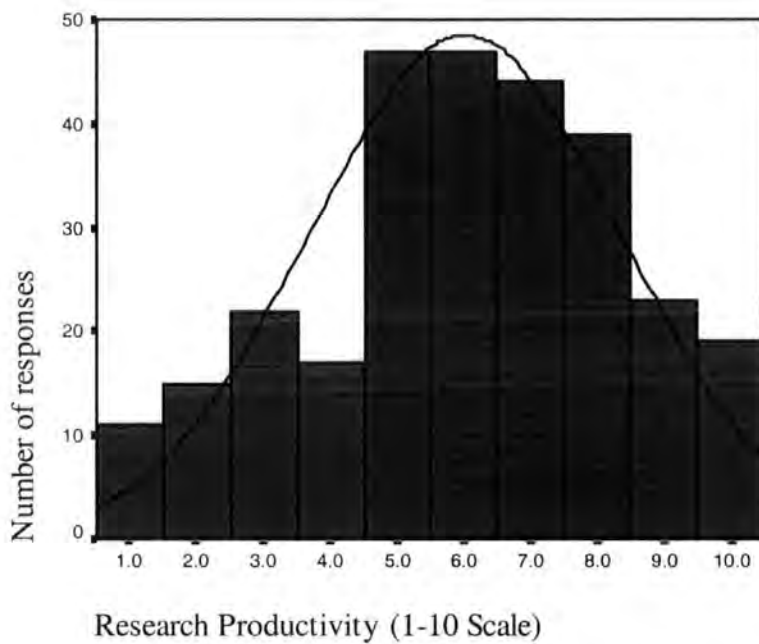


Figure 4.11: Distribution of self-rated research productivity

The above data on research productivity can be considered as nearly normally distributed as represented by the bell shape curve, and as shown by the low skewness value of -0.28. The data are more widely distributed about the mean than for teaching, as indicated by the bigger standard deviation of 2.33.

Table 4.12 shows the description of self rated administrative productivity data, in reference to the response distribution. Figure 4.12 then shows the distribution.

N	Minimum	Maximum	Mean	Std. deviation	Skewness	Skewness std. error
265	1	10	5.98	2.54	-0.14	0.15

Table 4.12: Data description of self-rated administrative productivity (1-10 scale)

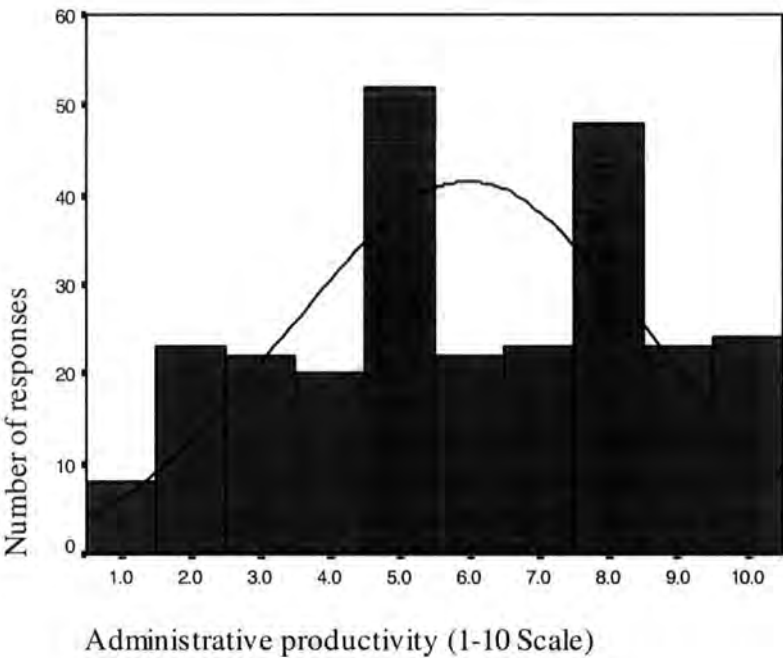


Figure 4.12: Distribution of self-rated administrative productivity

The distribution of the above data on administrative productivity could be considered flat. Apart from the high frequency on the productivity scale of 5 and 8 with 52 (19.6%), and 48 (18.1%) respectively, the frequency of the other values on the scale are not much different from each other.

Data from the respondents on the percentage of professors in the universities and faculties deserving appointment to their position (based on productivity) is interesting.

	N	Minimum	Maximum	Mean	Std. deviation	Skewness	Skewness std. error
% of professors deserving appointment (in faculty)	251	0	100	58.96	37.65	-0.41	0.15
% of professors deserving appointment (in university)	235	0	100	58.67	30.85	-0.40	0.16

Table 4.13: Percentage of professors in faculties and universities deserving appointment to their position, based on productivity (responses given in a percentage)

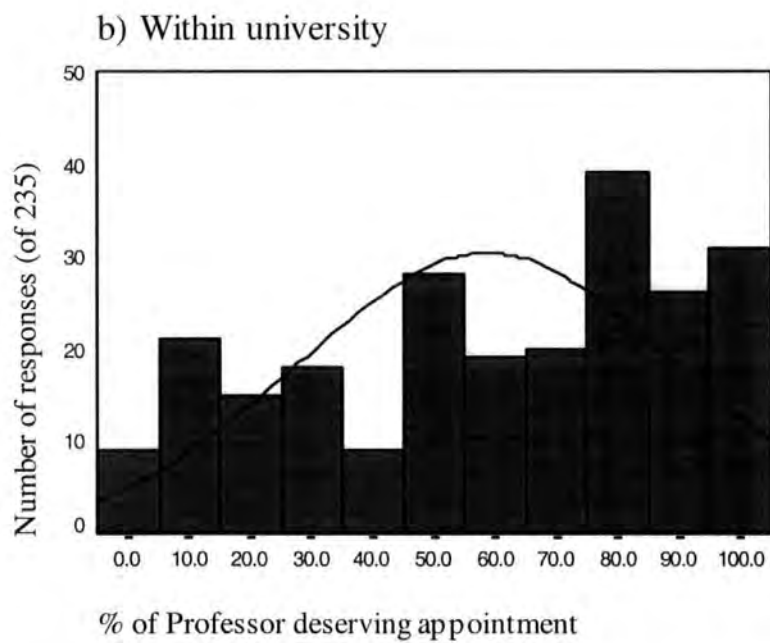
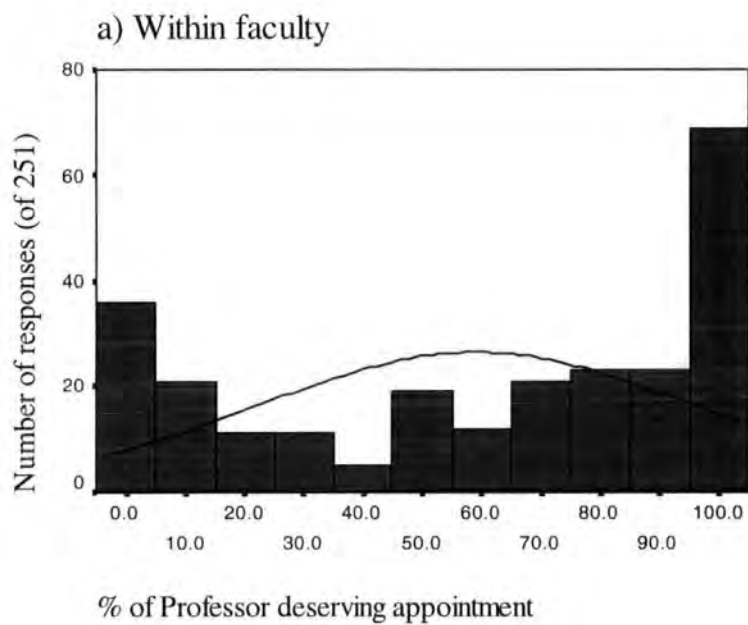


Figure 4.13: Percentage of professors within a) faculties and b) universities deserving appointment to that position

Table 4.13 and Figure 4.13 above show that the views of the academics have a slightly different pattern when they are looking at the productivity of professors within the faculty or the university. Their views on the productivity of professors within the faculty are rather strange with more at the extremes and less towards the middle of the percentage scale. It approaches a U-shaped distribution. The data are widely spread as the standard deviation of 37.65. On the other hand, their views on the productivity of professors within the university are less widely spread as the standard deviation is less (30.85).

4.3. Relationships in the data

In this section, the variables are related to one another in order to produce useful results. All the research questions will be answered, except the one about constraints for NEP implementation in HEI, which will be addressed in Chapter 5.

4.3.1. Productivity of Malaysian academics

Let us first consider the productivity of academics in terms of their research, teaching, and administrative service. Responses from the academics themselves on this are shown in Table 4.14.

Self rated productivity in the role of teaching, research or administration (1-10 scale: least to most)				
		Teaching	Research	Administration
N	Valid	284	284	265
	Missing	13	13	32
Mean		8.24	6.02	5.98
Median		8	6	6

Table 4.14: Academics self rated productivity

It is indicated by the mean here that the academics felt that teaching was their most productive role, followed by research and then administration. The median shows roughly the same outcome, but it can be explained more fully by looking at the box plot in Figure 4.14. Again, teaching is shown to be the most productive with about 50% of academics involved being within the range of 7 to 9 on a scale of productivity of 1 to 10, with both research and administration having a median of 6, but research productivity is considered higher, as 50% of the academics involved had the lower quartile higher, but the upper quartile the same compared to those in administration.

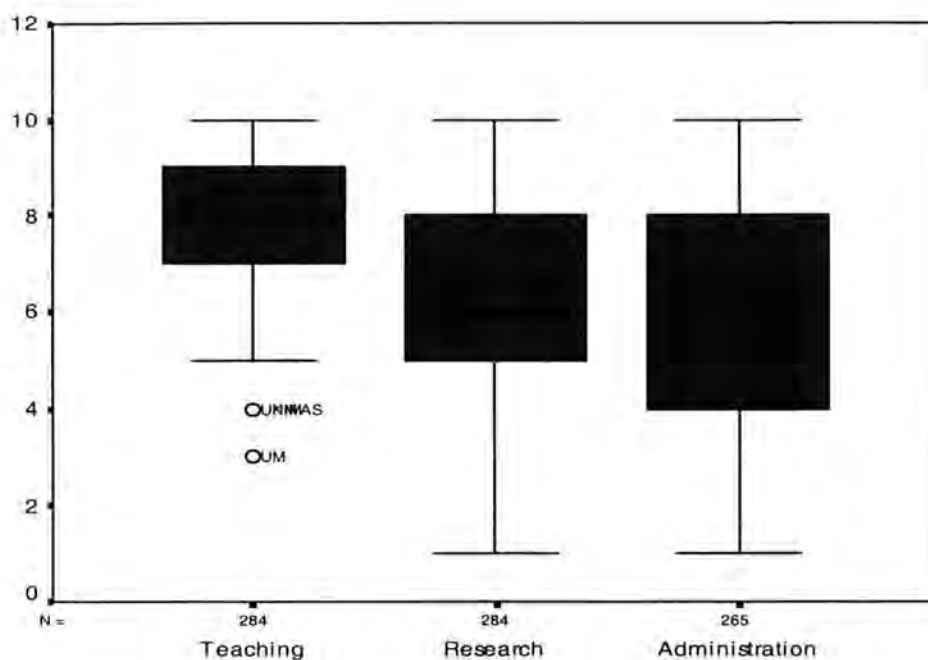


Figure 4.14: Comparison of self rated productivity of academic roles

A more rigorous but useful comparison can be made by comparing the roles in pairs as shown in Table 4.15. In each pair, only data from those academics who responded to both roles will be considered. In the first pair, 278 academics responded in relation to teaching and research productivity, followed by 264 and 261 responses to pairs 2 and 3 respectively.

In conjunction with this, by calculating paired data difference for the roles of each academic within each pair and then averaging them, the values can be checked as to whether they are significant at 95% confidence intervals. Statistically, there was a significant productivity difference between teaching and research ($p < 0.01$, $t = 14.56$, df

= 277) where teaching was perceived to be more productive, and between teaching and administrative duties ($p < 0.01$, $t = 13.29$, $df = 263$), where again teaching was perceived to be more productive. Therefore, of the three roles, teaching was perceived to be the most productive. However, there was no significant difference ($p > 0.05$, $t = -0.46$, $df = 260$) between research and administrative productivity.

	Paired differences mean		t	df	Sig. (2-tailed)
Pair 1	Teaching and research productivity	2.25	14.56	277	0.00
Pair 2	Teaching and administrative productivity	2.21	13.29	263	0.00
Pair 3	Research and administrative productivity	-0.09	-0.46	260	0.65

Table 4.15: Paired samples t-test for each two roles

The self rated productivity measures above could be validated to some extent by relating them to other responses (variables) in the questionnaire which also assess the academics' productivity. For this purpose, variables indicating teaching productivity are identified as percentage of time spent on teaching, number of courses taught to any degree level, number of students taught at every degree level and number of theses supervised at every degree level. Variables indicating research productivity are identified as percentage of time spent on research and number of research publications of any description. Variables indicating administrative productivity are represented as percentage of time spent on administration, or by specifying main administrative responsibilities over the last 24 months. In order to evaluate this variable quantitatively, the simple way is to just to total the number of responses.

4.3.1.1. Analyses on teaching productivity as indicated by various variables

Teaching productivity ('how productive in teaching') has an average of 8.24 on the scale of productivity based on responses from 284 academics. 281 of them have also given data on the percentage of working time spent on teaching over the last 24 months, so 281 responses appear in both variables providing an opportunity for us to examine the correlation between them. The correlation between these two variables is significant ($r = 0.25, p < 0.01$), as indicated by Spearman's rho correlation coefficient. This coefficient is suitable for seeking correlation value between two variables, where at least one of them contains non parametric data. In this case the 'how productive in teaching' is a non parametric variable because it provides a set of ordinal data. This correlation value is shown in Table 4.16 below.

The other nine teaching productivity indicators, together with their Spearman's rho correlation coefficient and the significant values in correlating them with the self rated teaching productivity variable are also shown in Table 4.16. From the significant and non significant values shown in this table, it can be seen that when the academics say they are productive in teaching, it implies that they have spent more time on teaching, teaching more Master's courses and more Master's students ($p = 0.00, p = 0.04$ and 0.01 respectively, all < 0.05), and teaching more Doctorate students. On the other hand, teaching any number of Bachelor and Doctorate courses, and any number of Bachelor students in the last 24 months was not significantly related to their own view on teaching

productivity. Any thesis supervision, be it a Bachelor, Master or Doctorate thesis, was not significantly related to self rated teaching productivity.

	Correlation coefficient	Sig. (2-tailed)	N
1] % of working time spent teaching	0.25	0.00	281
2] Teaching (Bachelor courses)	0.09	0.13	271
3] Teaching (Bachelor students)	0.03	0.73	145
4] Teaching (Master courses)	0.17	0.04	151
5] Teaching (Master students)	0.29	0.01	75
6] Teaching (Doctorate courses)	0.24	0.06	64
7] Teaching (Doctorate students)	0.33	0.05	36
8] Supervising (Bachelor theses)	0.10	0.13	230
9] Supervising (Master theses)	0.00	0.99	156
10] Supervising (Doctorate theses)	0.07	0.48	94

Table 4.16: Correlation on self rated teaching productivity (1-10 scale) in relation to ten teaching productivity indicators

It is useful to create single composite measures of productivity indicators which share the same unit of measurement. The two sets of teaching productivity indicators each have their own single composite measure, the first one consisting of the total number of Bachelor, Master and Doctorate courses taught, and Bachelor, Master and Doctorate theses supervised when the theses are treated here as courses. The second one consisting of the total number of Bachelor, Master and Doctorate students taught, and Bachelor, Master and Doctorate theses supervised when the number of theses are treated here as representing the number of students. Both of them are then understood as measuring the

total time spent in teaching. The views on self rated teaching productivity outcomes can then be checked in terms of validity by correlating them with the above two single composite measures. Data on the first single composite measure, the total number of courses and theses is presented below in Figure 4.17.

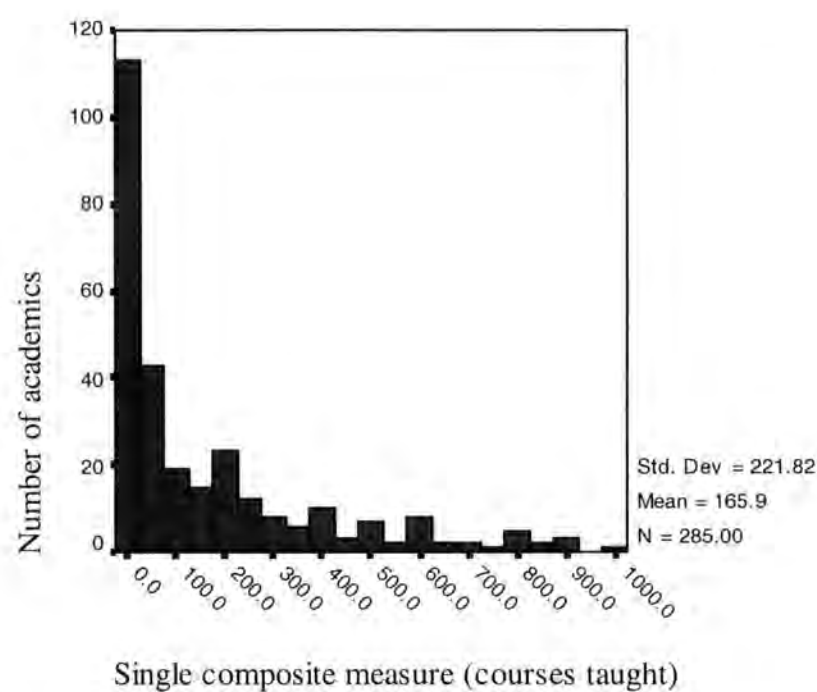


Figure 4.17: Single composite measure of teaching productivity indicators (number of courses taught)

Data on the above figure shows the positive skewness distribution. Most of the academics were on the side of teaching fewer courses. In order to check the validity of responses on self rated teaching productivity, they can be compared to the composite measure as shown in the scatter plot in Figure 4.18 below. The number of courses taught

were first transformed into their Logarithm (with base 10) values in resulting an interesting, clearer, smoother and useful outcomes. Those have given 0 number of courses taught or not responded is excluded here. The Spearman's rho correlation coefficient for this relationship is 0.051. The distribution looked reasonable in some parts, where some academics teaching fewer courses rated themselves as less productive, and those (quite a big number) teaching a larger number of courses rated themselves as highly productive. However, by referring to the top left area of the graph, the responses can be interpreted as not so valid when, for example, at least five academics rated themselves as very productive (at scale of 10) but had taught very few courses (less than 10) over the last 24 months. To make this interpretation clearer, the scatter plot was then reduced to include only the academics who taught a hundred courses (Logarithm of 100 with base 10 is 2) or less as shown in Figure 4.19 below.

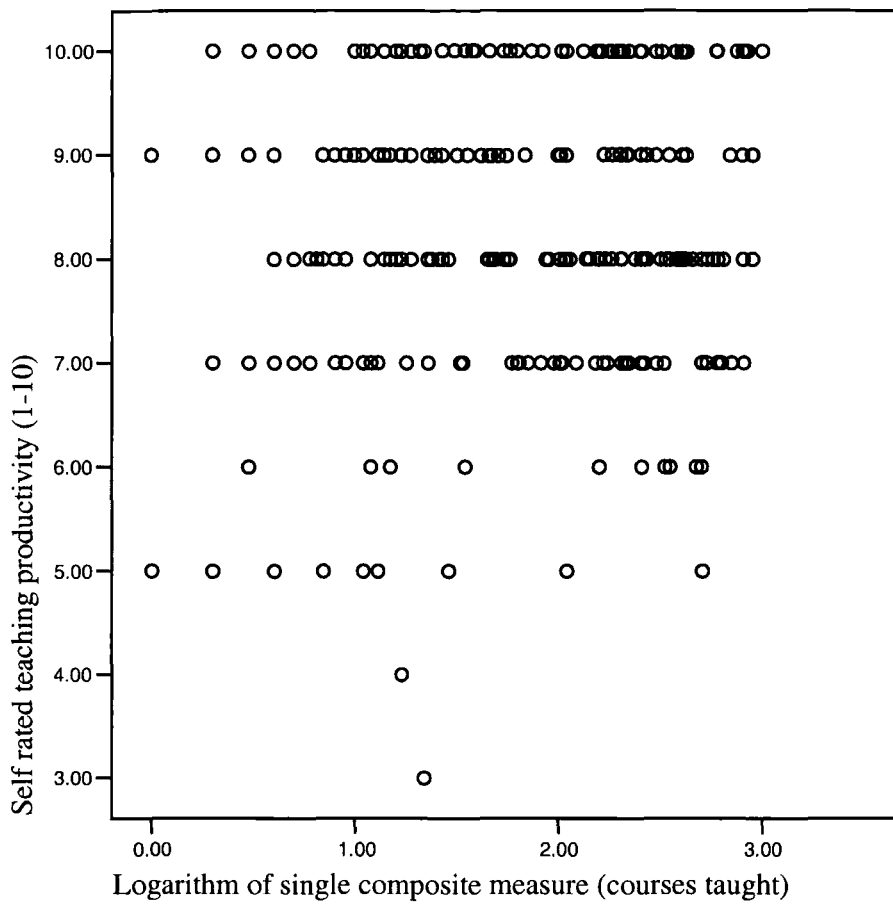


Figure 4.18: Scatter plot to show the relationship between self rated teaching productivity and logarithm (with base 10) of single composite measures on number of courses taught

It is clearly shown in Figure 4.19 that, in considering the Logarithm value of 0.5 which bring the value of 3.17 as the number of courses taught, it is implied here that there are two academics rated themselves as very productive on a scale of teaching productivity with a maximum of 10, yet the total number of courses taught and theses supervised

were only about 3 or below over the last 24 months. It can be concluded here that the number of courses taught could not be reliable as a basis for the self rating of teaching productivity. This must be taken into account if the responses to ‘How productive are you in teaching’ were to be considered a valid measure of teaching productivity.

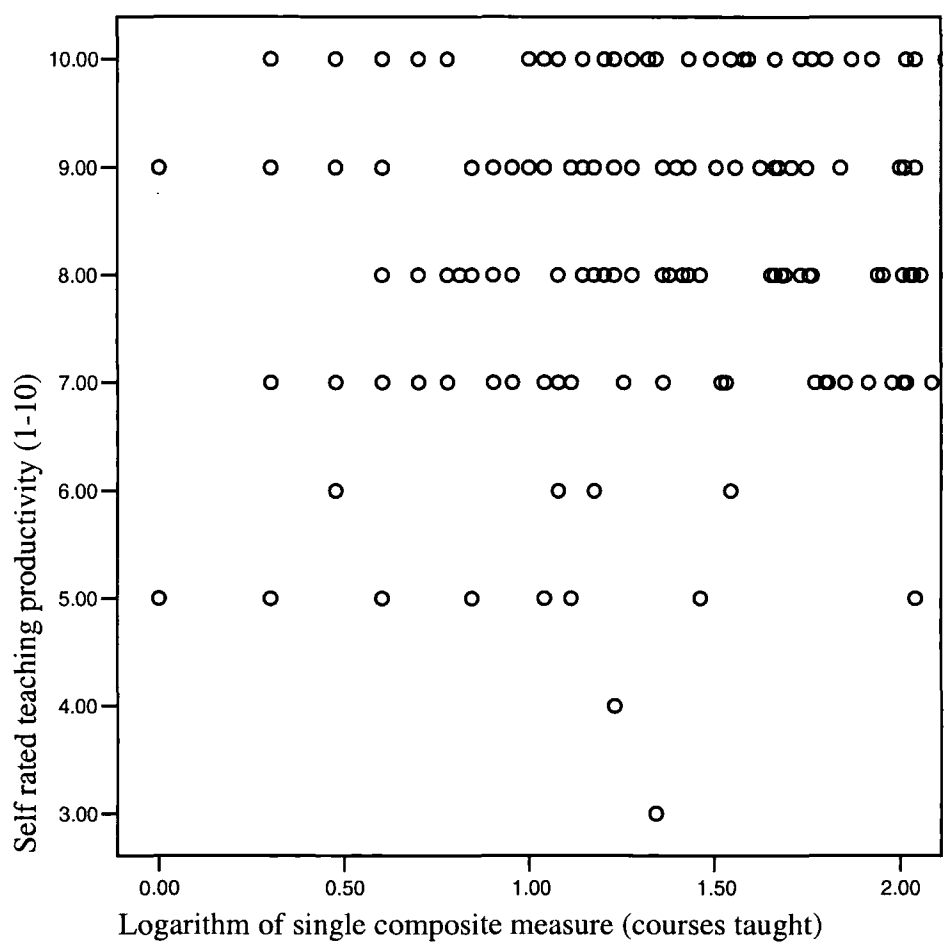
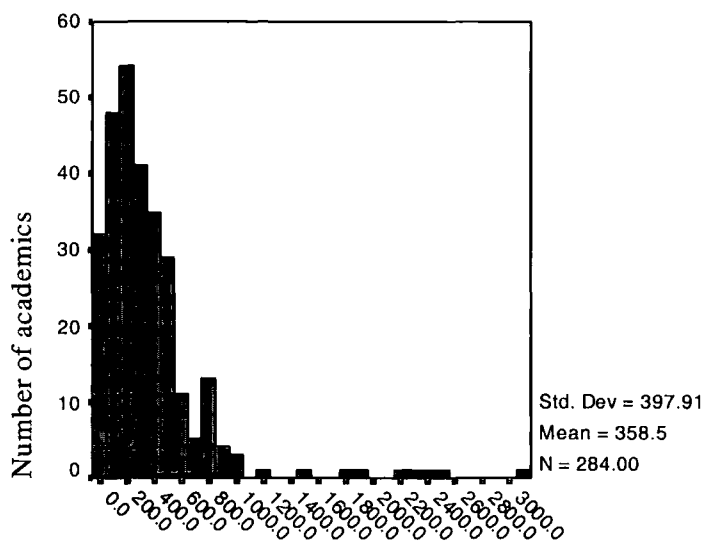
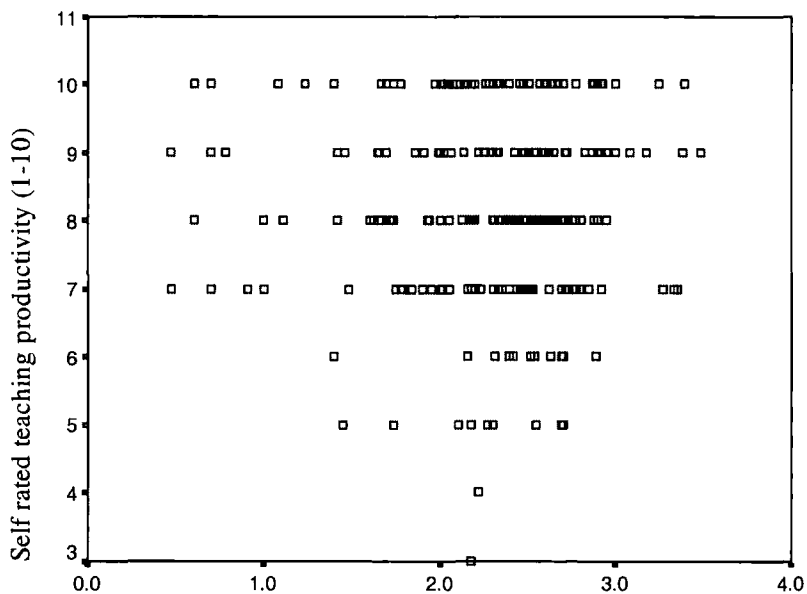


Figure 4.19: Relationship between self rated teaching productivity and logarithm (with base 10) of single composite measures on number of courses taught (for a hundred courses taught and below)

The next step is to see whether the next single composite measure of teaching productivity can become the basis for the academics' teaching productivity ratings. This composite relies on the number of students and theses taught. Figure 4.20 utilises a graph on the distribution of the single composite measures of the number of students and theses taught in the last 24 months and a scatter plot to show the relationship between the composite measure (converted to a logarithm scale) and self rated teaching productivity. For the latter, in making the explanation short and clear, except for a few outliers, the relationship pattern is pretty close to the one we saw in the previous figure (involving the composite measure on teaching productivity based on the number of courses and theses taught). Again, we reach the conclusion that the number of students and theses taught could not become a reliable basis for self rated teaching productivity. After all, the Spearman's rho correlation coefficient for this relationship is 0.028.



Single composite measure (students taught)



Logarithm of single composite measure (students taught)

Figure 4.20: Distribution of data on the second single composite measure of teaching - the total number of students and theses taught (above); and relationship between the single composite measures (converted to a log scale) and self rated teaching productivity (below)

After consideration of the various factors the academics could have taken as the basis for self rated teaching productivity, it seems that, in general, the most significant factor is the percentage of time spent on teaching activities. Academics who had taught even a small number of courses or students apparently rate themselves as highly productive in teaching when the amount of time spent in dealing with these courses and students was relatively high, when, for example, they had undertaken tutorials, laboratory work, discussion etc. There was not sufficient information to follow this hypothesis up in detail.

4.3.1.2. Analyses on research productivity as indicated by various variables

Research productivity has a mean of 6.02 on a self rated productivity scale of 1-10, and it was correlated with other research outcome indicators. Table 4.21 shows that five of the research indicators have a significant correlation with the variable 'how productive are you in doing research'. The five research indicator variables are percentage of working time doing research, including the number of academic works published, i.e. books, research reports, journal articles and conference papers. The number of non journal articles published, number of chapters published, number of edited books published and number of other publications seem not to be of any major significance in increasing research productivity. These are not seen as having real academic importance even for career advancement.

	Correlation coefficient	Sig. (2-tailed)	N
1] % of working time doing research	0.59	0.00	279
2] No. of academic books published	0.19	0.03	128
3] No. of research reports published	0.37	0.00	195
4] No. of journal articles published	0.38	0.00	193
5] No. of non journal articles published	0.11	0.24	128
6] No. of chapters in books published	0.12	0.12	159
7] No. of conference papers published	0.33	0.00	251
8] No. of edited books published	0.15	0.13	109
9] No. of 'others' published	0.21	0.08	70

Table 4.21: Correlation on self rated research productivity (1-10 scale) in relation to nine research productivity indicators

As is shown in the teaching productivity outcomes, the formation of single composite measures of research comprising a number of research productivity indicators is useful. The validity of self rated research productivity can be checked by cross examining it with this single composite measure. After excluding percentage of time spent on research (as it does not have a similar measurement unit), the other research productivity indicators, such as those in Table 4.21 covering any material published, are included in this composite measure. Specifically, the items are number of academic books, research reports, journals, non journals, chapters in books, conference papers, edited books and other published work.

The formation of a single composite measure of research productivity began by conducting reliability analysis, and the analysis results are shown in Table 4.22 and 4.23

below. They can tell us whether all the research productivity indicator variables should be included, or if there are any to be left out.

Items published	Scale mean if item deleted	Alpha if item deleted
Number of books	16.54	0.38
Number of research reports	15.12	0.38
Number of journals	15.02	0.35
Number of non-journals	14.69	0.23
Number of chapters in books	16.21	0.37
Number of conference papers	10.94	0.23
Number of edited books	16.62	0.40
Other published work	13.71	0.70
Reliability coefficients N of cases = 48.0 Alpha = .4036		

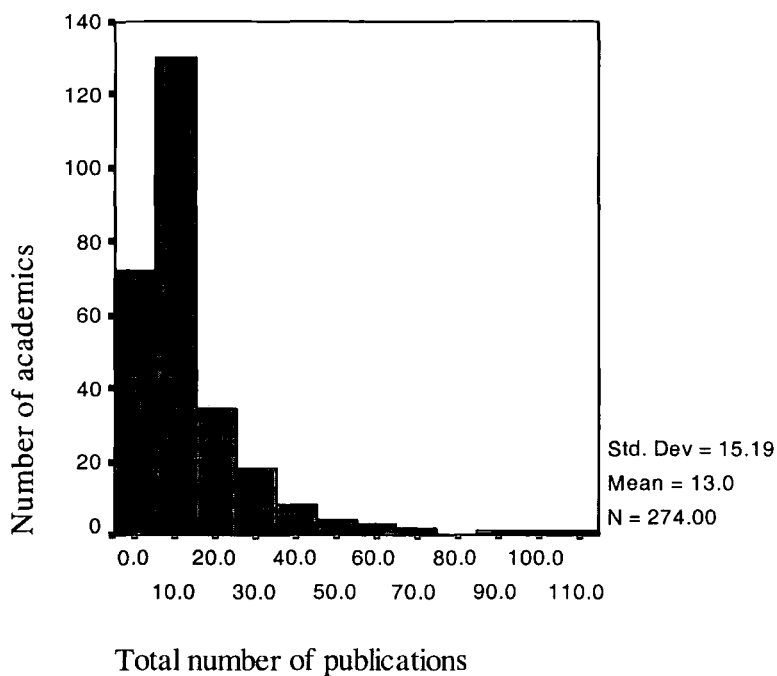
Table 4.22: Reliability analysis indicated by reliability coefficient, alpha

Table 4.22 indicates that, removing any one productivity item except ‘other’ will not bring a big change in alpha value. If we remove publication in ‘other’, the single composite measure becomes much more reliable as the alpha value is changed considerably from 0.40 (as shown in Table 4.22) to 0.73 (as in Table 4.23). Therefore, the composite measure of research will comprise seven items as in Table 4.23.

Items	Scale mean if item deleted	Alpha if item deleted
Number of books	15.16	0.73
Number of research reports	13.61	0.70
Number of journals	13.12	0.66
Number of non-journals	12.94	0.65
Number of chapters in books	14.44	0.71
Number of conference papers	9.57	0.67
Number of edited books	15.14	0.73
Reliability coefficients N of cases = 77.0 Alpha = .7292		

Table 4.23: Reliability analysis indicated by reliability coefficient, alpha, after removing number of ‘other’ publications

A single composite measure of research productivity encompassing seven items is then referred to here simply as the total number of publications, and its data distribution is as seen in Figure 4.24 below.



Minimum	Maximum	Skewness
0	114	3.20

Figure 4.24: Single composite measure of research productivity – Total number of publications (7 items)

The above distribution is positively skewed with more data bunched together at the lower end of the publication scale. In trying to simplify the distribution for the purpose of comparing it with the other variables, outliers shown in the distribution are removed to ensure less variable data. The outliers are coded as missing data here, where the horizontal axis is set up with a maximum of 50. The refined distribution is shown in Figure 4.25 below.

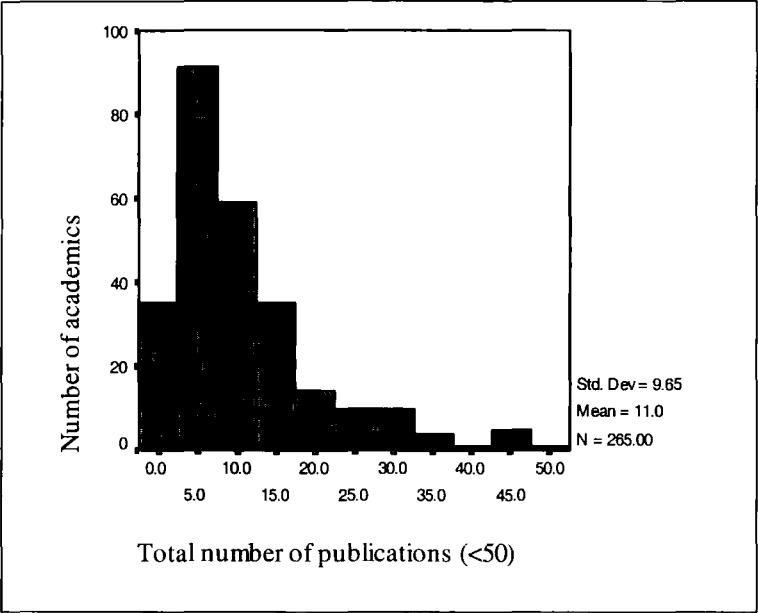


Figure 4.25: The chart show the refined (without outliers) distribution of ‘Total number of publications’

In order to check the validity of responses on self rated research productivity, they are correlated to the refined ‘Total number of publication’ as shown in Figure 4.26 below where the latter was first converted into a Logarithm scale. Again, those who have total publication as 0 were excluded in this scale.

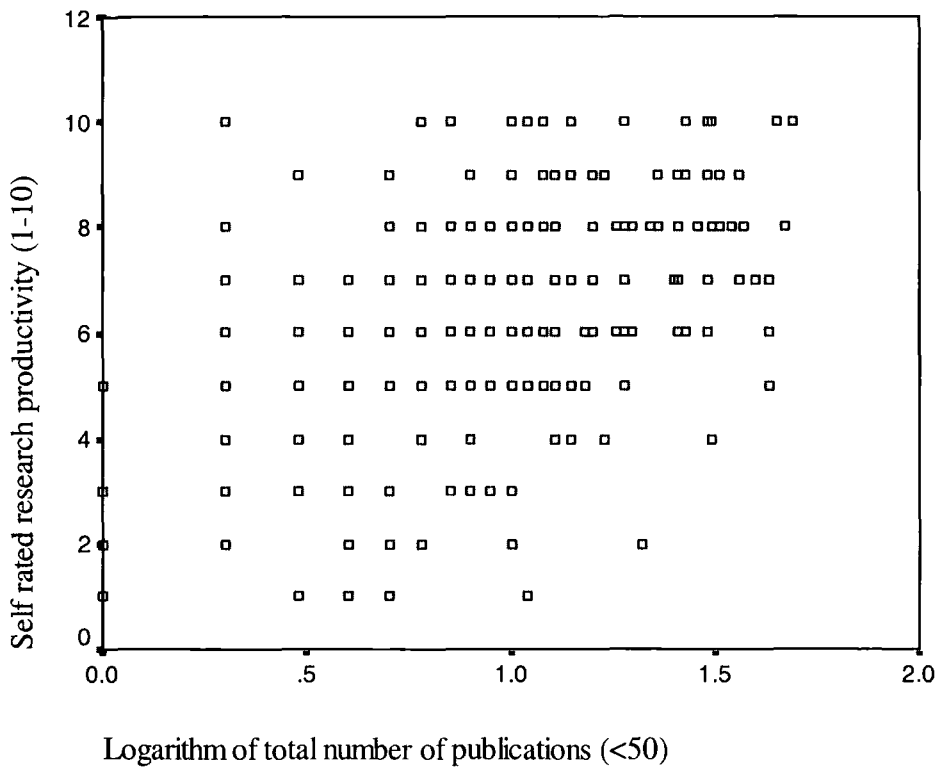


Figure 4.26: Relationship between self rated research productivity and logarithm of total number of publication (<50) with Spearman's rho correlation coefficient of 0.496 [p(2-tailed) = 0.00 < 0.01, N = 260]

Even though the correlation is statistically very significant, because the correlation coefficient is considered modest, the generalisation that the academics rated their research as productive, based on the quantity of publications they had produced, can not simply be relied on. It can be seen in Figure 4.26 above that where, in the diagonal area from zero (in a positive direction), the scattered data justified the significant correlation, in other areas, particularly at the top left of the graph, we see strange results when, for example, there are academics who produced less than 5 total publications (logarithm

value of 0.7) over the last 24 months but in some cases rated themselves as highly productive. It can be assumed here that these academics might consider the quality aspects rather than quantity when they responded to this question. They might think that even though they had had very few publications, those publications had brought great benefit to all parties. Some of the research had not even been published, but contributed much to the national debate.

4.3.1.3. Analyses on administrative productivity as indicated by a few variables

The respondents' self rated administrative productivity (presented by 'how productive are you in administration?') has an average of 5.98 on a scale of 1-10. Generally, those academics who rated themselves as high on the administrative productivity scale had spent more time in performing administrative tasks; in other words, they thought that the more time they spent, the more productive they were. The evidence for this relationship is shown when there is a significant correlation (Spearman's rho correlation coefficient, $r = 0.55$; $p < 0.01$) between self rated administrative productivity and percentage of time spent for doing administration. The academics' time spent indicates productivity.

Also indicating administrative productivity, 82.15% of the academics responded to the online questionnaire, highlighting the most important administrative task they had handled over the last 24 months. These responses are very encouraging as we can say here that the majority of the sample had to shoulder at least one important administrative task. This result is also shown in Appendix 10 (for item 22) of the survey summary. The

number of these responded academics can be related to the self rated productivity score as shown in Figure 4.27 below.

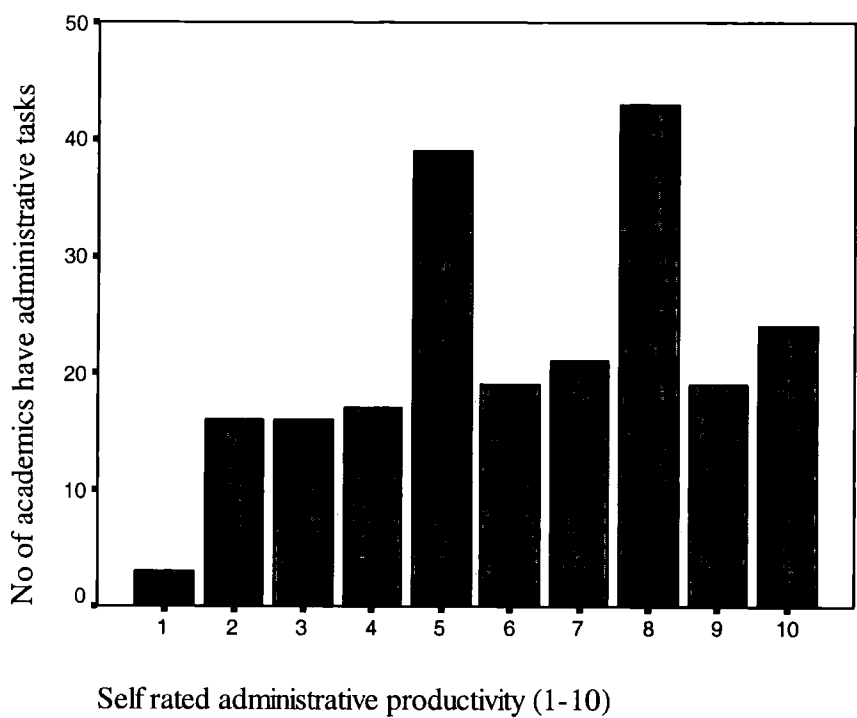


Figure 4.27: Number of academics mentioning their administrative productivities in relation to different self rated administrative scale.

It is shown from this figure that there were about the same number of academics in almost each self rated administrative productivity scale, mentioned their key administrative responsibilities. However, the scale of 5 and 8 have a great number of academics responded to this, and the scale of 1 has very few.

4.3.2. Factors reducing or enhancing academic productivity

There are some factors which affect academic productivity (self rated) and some which do not. They can be categorical or in the form of interval data, and their effect can be to either reduce or enhance the productivity of any academic role. The academic roles again refer to teaching, research and administrative tasks.

In this context, teaching, research or administrative productivity can be explained in terms of how significantly different they are within different category of factors or variables, for example in gender, university attachment, marital status, term of academic post, academic rank, highest degree, place the highest degree obtained, field of expertise, whether the field of expertise relates to the highest degree, quality of training, organisations belonged to locally and internationally, whether the discipline creates opportunities and whether the environment is conducive enough. For any of these factors which have two categories, an Independent-Samples T Test was used to test the significant result; for three groups and above, ANOVA was used.

There are also some interval variables which can affect academic productivity, such as how long since gaining the highest degree, how long in the field, years employed in the university and years employed in professional work outside. Correlation is best used to test the significant effect of these variables on role productivity. Correlation is also used to compare related effects among teaching, research and administrative productivity themselves, and with some ordinal variables, for example on 'the number of people in the household' and 'how encouraging and conducive the environment to the academic'.

4.3.2.1. The effect of factors (with two categories) on the productivity of each academic role (teaching, research or administration)

According to the differences between gender, variances in teaching productivity data are assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a significant mean difference ($t = -2.28$, $p < 0.05$) in teaching productivity between males and females, where females are more productive in teaching with a mean of 8.42.

Variances in research productivity data are also assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a significant mean difference ($t = 2.29$, $p < 0.05$) in research productivity between males and females, where males are more productive in research with a mean productivity of 6.34.

Again, variances in administrative productivity data are assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a non significant mean difference ($t = 1.49$, $p > 0.05$) in administrative productivity between males and females, where male and female academics are considered equal in administrative productivity.

Any relationship resulting from gender, or other variables of this type can be seen as fixed associations. The universities can do little to improve the results. Bloom (1979) introduced the concept of alterable variables which can be controlled. In line with this

thought, instead of gender, the university could look, for example, at what academics could do to interact effectively with all parties involved in each role, and systematic procedures could be introduced. Or, alternatively, look at how a policy of recruitment based on gender would achieve a growth in productivity. The university could control recruitment at this point.

Table 4.28 below shows the statistic of mean differences between male and female academics in relation to self rated teaching, research and administrative productivity.

	No. of academics		Mean difference	p
	Male	Female		
Teaching productivity (1-10 scale)	137	146	-0.37	0.02*
Research productivity (1-10 scale)	135	148	0.63	0.02*
Administrative productivity (1-10 scale)	126	138	0.46	0.14

* p < 0.05
 Note: Levene's test conducted for differences in variance (for each teaching, research and administrative productivity data) were to be non-significant

Table 4.28: Independent-samples t test – Gender in relation to teaching, research or administrative productivity

From the results above, in considering the standard deviations on self rated teaching, research and administrative productivity which are 1.39, 2.33 and 2.54 respectively, the effect sizes for differences resulting from gender can be identified. Effect size is how big the difference (in this case is mean different between male and female) is in standard

deviation units. Therefore, effect sizes between gender for the teaching, research and administrative productivity are 0.27, 0.27 and 0.18 respectively. The significant results on teaching and research productivity happen for the bigger effect size.

According to the differences between two places of getting the highest degree, variances in teaching productivity data are assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a non significant mean difference ($t = 0.09$, $p > 0.05$) in teaching productivity between those who got their highest degree in Malaysia and those who got it overseas, where all of them are considered equal in teaching productivity.

Variances in research productivity data are also assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a significant mean difference ($t = 2.38$, $p < 0.05$) in research productivity between those who got their highest degree in Malaysia and those who got it overseas, where those who graduated overseas are more productive doing research with a mean productivity of 6.33.

Again, variances in administrative productivity data are also assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a significant mean difference ($t = 2.54$, $p < 0.05$) in administrative productivity between those who got their highest degree in Malaysia and those who got theirs overseas, where those who graduated overseas are more productive in administration with a mean productivity of 6.34.

Table 4.29 below shows the statistic of mean differences between those academics who got their highest degree in Malaysia and those who got it overseas in relation to self rated teaching, research and administrative productivity.

	No. of academics		Mean difference	p
	Malaysia	Overseas		
Teaching productivity (1-10 scale)	135	148	0.02	0.93
Research productivity (1-10 scale)	135	148	-0.66	0.02*
Administrative productivity (1-10 scale)	126	138	-0.79	0.01*

* p < 0.05

Note: Levene's test conducted for differences in variance (for each teaching, research and administrative productivity data) were all to be non significant

Table 4.29: Independent-samples t test – Place of getting the highest degree in relation to teaching, research or administrative productivity

From the above results, and in considering the standard deviations on self rated teaching, research and administrative productivity data which are 1.39, 2.33 and 2.54 respectively, the effect sizes for differences resulting from two places of getting the highest degree can be identified as 0.01, 0.28 and 0.31 for each role respectively. The more significant result in mean difference is, (particularly in research and then administrative productivity) the bigger effect size of the difference is.

In another way of looking at differences, all responses on field of expertise were first placed into two categories, science and technology related disciplines and non science related disciplines. The two categories are in line with the way the sample was formed at the beginning where the stratified random sampling procedure considered these two categories of discipline and three categories of the university's years of establishment.

In accordance to this, variances in teaching productivity data are assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a significant mean difference ($t = 2.05$, $p < 0.05$) in teaching productivity between those in science and technology related disciplines and those in non science related disciplines, where those in the latter are more productive in teaching with a mean productivity of 8.39 compared to 8.05.

Variances in research productivity data are also assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a non significant mean difference ($t = 0.89$, $p > 0.05$) in research productivity between those in science and technology related disciplines and non science related disciplines.

Again, variances in administrative productivity data are assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, again, there is a non significant mean difference ($t = 1.13$, $p > 0.05$) in administrative productivity between those in science and technology related disciplines and non science related disciplines.

Table 4.30 below shows the statistic of mean differences between those academics who were in science related disciplines and non science related disciplines in relation to self rated teaching, research and administrative productivity.

	No. of academics		Mean difference	p
	Pure science related	Non science related		
Teaching productivity (1-10 scale)	122	160	-0.34	0.04*
Research productivity (1-10 scale)	121	162	0.25	0.38
Administrative productivity (1-10 scale)	116	147	-0.36	0.26

* p < 0.05
 Note: Levene's test conducted for differences in variance (for each teaching, research and administrative productivity data) were all to be non significant

Table 4.30: Independent-samples t test – Field of expertise (science or non science) in relation to teaching, research or administration productivity

From the results above, in considering the standard deviations on self rated teaching, research and administrative productivity which are 1.39, 2.33 and 2.54 respectively, the effect sizes for differences resulting from two type of field of expertise can be identified as 0.24, 0.10 and 0.14 for each role respectively. So, it follows the common pattern (even though not necessarily true) for the significant difference happen on the difference with the bigger effect size.

According to the differences between field of expertise related and not related to the highest degree, variances in teaching, research and administrative productivity data are all assumed as equal when Levene's test for equality of variances for each of them shows a non significant result. In looking at the t-test under this assumption, productivity data on teaching, research and administration, all show a non significant mean difference for teaching, research and administrative productivity ($t = 1.52, 0.16, 1.12$ respectively, all with $p > 0.05$) between those whose expertise relates to their highest degree and those whose expertise does not.

Table 4.31 below shows the statistic of mean differences between those academics who were in the field of expertise related and not related to the highest degree in relation to self rated teaching, research and administrative productivity.

	No. of academics		Mean difference	p
	Field of expertise related to the highest degree	Field of expertise not related to the highest degree		
Teaching productivity (1-10 scale)	22	260	-0.47	0.13
Research productivity (1-10 scale)	23	260	0.08	0.88
Administrative productivity (1-10 scale)	20	243	0.66	0.26

Note: Levene's test conducted for differences in variance (for each teaching, research and administrative productivity data) were all to be non significant

Table 4.31: Independent-samples t test – Field of expertise related or not to the highest degree in relation to teaching, research or administration productivity

From the results above, in considering the standard deviations on self rated teaching, research and administrative productivity which are 1.39, 2.33 and 2.54 respectively, the effect sizes for differences resulting from type of field of expertise related or not to the highest degree can be identified as 0.33, 0.03 and 0.25 for each role respectively. Interestingly, in comparing with the effect size values previously in this section, the effect sizes between groups in regard to teaching and administrative productivity are considered higher here even though both differences are not significant.

According to the differences between disciplines provides and not provide career opportunities, variances in teaching productivity data are assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a non significant mean difference ($t = 0.18, p > 0.05$) in teaching productivity between those who think that their discipline of expertise provides opportunities for career advancement and those who do not. Most academics do not worry about career opportunities when teaching, maybe because they find teaching an enjoyable task and so have fewer tendencies to dwell on negative feelings when standing in front of the class.

Variances in research productivity data are assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a significant mean difference ($t = 2.42, p < 0.05$) in research productivity between those who think that their discipline of expertise provides opportunities for career advancement and those who do not, where those who think the former are more productive in research with a productivity mean of 6.14.

Variances in administrative productivity data are also assumed as equal when Levene's test for equality of variances shows a non significant result. In looking at the t-test under this assumption, there is a significant mean difference ($t = 2.04$, $p < 0.05$) in administrative productivity between those who think that their discipline of expertise provides opportunities for career advancement and those who do not, where those who think the former are more productive in doing administrative work with a mean productivity of 6.11.

Table 4.32 below shows the statistic of mean differences between those academics who felt their discipline provides career opportunities and those who did not feel it in relation to self rated teaching, research and administrative productivity.

	No. of academics		Mean difference	p
	Discipline provides career opportunities	Discipline does not provide career opportunities		
Teaching productivity (1-10 scale)	27	254	-0.05	0.86
Research productivity (1-10 scale)	26	256	-1.14	0.02*
Administrative productivity (1-10 scale)	26	236	-1.07	0.04*

* $p < 0.05$

Note: Levene's test conducted for differences in variance (for each teaching, research and administrative productivity data) were all to be non significant

Table 4.32: Independent-samples t test – Field of expertise providing career opportunities or not in relation to teaching, research or administration productivity

From the above results, in considering the standard deviations on self rated teaching, research and administrative productivity which are 1.39, 2.33 and 2.54 respectively, the effect sizes for differences resulting from the field of expertise providing career opportunities or not can be identified as 0.04, 0.49 and 0.42 for each role respectively, which show that the big effect size bring the significant different results.

4.3.2.2. The effect of factors (more than two categories) on the productivity of each academic role (teaching, research or administration)

ANOVA⁴³ in Table 4.33 below shows that there is no significant difference ($F = 1.85$, $p > 0.05$) between different universities in the academics' views of their teaching productivity as shown by the mean of teaching productivity. However, there is a significant difference ($F = 4.46$, $p < 0.01$) between different universities in terms of the academics' views of their research productivity, where the means of research productivity vary from 6.67 in USM as the highest to 4.70 in UNIMAS as the lowest value. There is no significant difference ($F = 1.46$, $p > 0.05$) between different universities in the academics' views of their administrative productivity, as shown by the mean productivity.

⁴³ ANOVA (analysis of variance) is used to test the hypothesis that several means are equal (Source: Statistical Package for Social Sciences (SPSS) 11.0 for Windows).

ANOVA			Sum of squares	df	Mean square	F	Sig.
Teaching productivity (1-10 scale)	Between groups		17.6125	5	3.5225	1.85	0.10
	Within groups		527.5253	277	1.9044		
	Total		545.1378	282			
Research productivity (1-10 scale)	Between groups		113.4541	5	22.6908	4.46	0.00
	Within groups		1409.2597	277	5.0876		
	Total		1522.7138	282			
Administrative productivity (1-10 scale)	Between groups		46.3622	5	9.2724	1.46	0.20
	Within groups		1641.2591	258	6.3615		
	Total		1687.6212	263			

DESCRIPTIVES		N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Research productivity (1-10 scale)	UM	48	5.46	2.17	0.31	4.83	6.09	1	10
	USM	42	6.67	2.25	0.35	5.97	7.37	2	10
	UKM	98	6.59	1.99	0.20	6.19	6.99	1	10
	UNIMAS	23	4.70	2.67	0.56	3.54	5.85	1	10
	UMS	27	5.89	2.65	0.51	4.84	6.94	1	10
	UPSI	45	5.60	2.41	0.36	4.88	6.32	1	10
	Total	283	6.03	2.32	0.14	5.76	6.30	1	10

Table 4.33: ANOVA of self rated academic productivity (and data descriptive for research productivity) in relation to the university attached

Figure 4.34 below shows further information in Table 4.33. Only charts for those that are significantly different in the above are needed here. Therefore, this Figure shows responses from different universities for self rated research productivity, followed by responses in different universities for outcome reported research productivity for comparison purpose. As research productivity may be better measured by outcomes reported rather than self rated, that is why the second chart is included for comparison. The outcomes reported productivity is the total publications produced. Means with error

bars represent the academics' views on role productivity research across different universities. Academics in UNIMAS seem to have mean of research productivity in both self rated and outcome reported as the lowest.

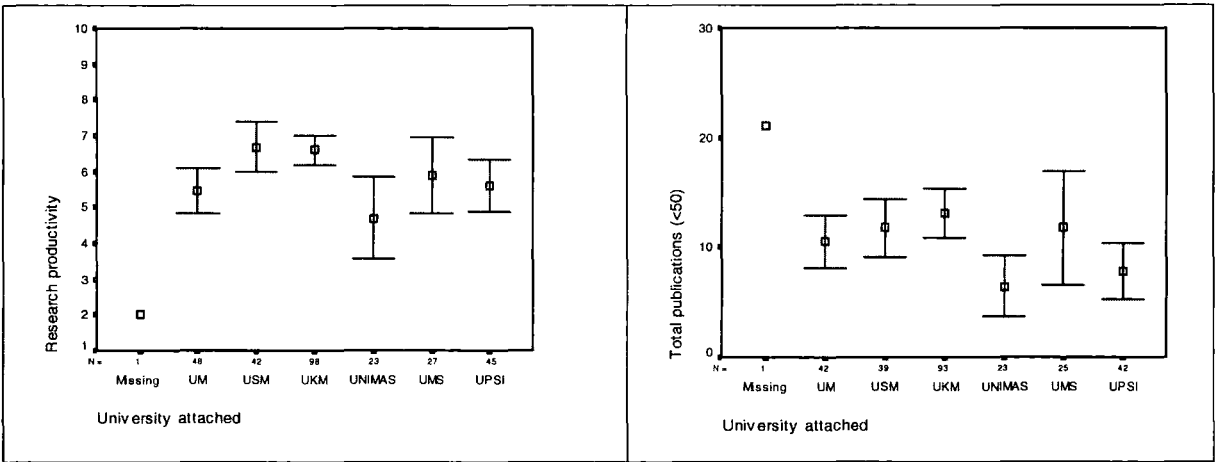


Figure 4.34: Means with error bars of 95% confidence interval in different universities for self rated research productivity, and outcome reported research productivity (total publications)

ANOVA in Table 4.35 below shows that there is no significant difference ($F = 0.50, p > 0.05$) in the academics' views on their teaching productivity in relation to marital status as shown by the mean of teaching productivity. There is a significant difference ($F = 4.90, p < 0.05$) in relation to marital status in terms of the academics' views on their research productivity, where the means of research productivity are 6.2, 5.1, and 4.7 for married, single and widowed academics respectively. There is no significant difference ($F = 1.03, p > 0.05$) in relation to marital status in the academics' views on their administrative productivity, as shown by the mean productivity.

ANOVA			Sum of squares	df	Mean square	F	Sig.		
Teaching productivity (1-10 scale)	Between groups		1.9297	2	0.9649	0.50	0.61		
	Within groups		543.7310	280	1.9419				
	Total		545.6608	282					
Research productivity (1-10 scale)	Between groups		52.0349	2	26.0174	4.90	0.01		
	Within groups		1485.8379	280	5.3066				
	Total		1537.8728	282					
Administrative productivity (1-10 scale)	Between groups		13.3543	2	6.6771	1.03	0.36		
	Within groups		1686.4033	261	6.4613				
	Total		1699.7576	263					
DESCRIPTIVES		N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Research productivity (1-10 scale)	Married	235	6.2128	2.2658	0.15	5.92	6.50	1	10
	Single	42	5.1429	2.4050	0.37	4.39	5.89	1	10
	Widow	6	4.6667	3.0768	1.26	1.44	7.90	1	8
	Total	283	6.0212	2.3353	0.14	5.75	6.29	1	10

Table 4.35: ANOVA of self rated academic productivity (and data descriptive for research productivity) in relation to marital status

ANOVA in Table 4.36 below shows that there is no significant difference ($F = 0.25$, $p > 0.05$) in relation to term of academic post in the academics' views on their teaching productivity, shown by the mean of teaching productivity. There is also a non-significant difference ($F = 0.96$, $p > 0.05$) in relation to term of academic post in the academics' views on their research productivity. Everybody does as much research as possible at about the same pace for their own target. There is, however, a significant difference ($F = 3.38$, $p < 0.05$) in relation to term of academic post in the academics' views on their administrative productivity. In this situation, by discounting those in the 'other' term of

academic post (as there are only two cases out of 265 in this category), the permanent academics' views on their administrative productivity is the highest, followed by the contracted academics, and, lastly, by the temporary academics. Maybe those with temporary status felt less motivated as their position was not secure.

ANOVA			Sum of squares	df	Mean square	F	Sig.		
Teaching productivity (1-10 scale)	Between groups		1.4838	3	0.4946	0.25	0.86		
	Within groups		544.2345	280	1.9437				
	Total		545.7183	283					
Research productivity (1-10 scale)	Between groups		15.6568	3	5.2189	0.96	0.41		
	Within groups		1523.2552	280	5.4402				
	Total		1538.9120	283					
Administrative productivity (1-10 scale)	Between groups		63.7608	3	21.2536	3.38	0.02		
	Within groups		1640.1034	261	6.2839				
	Total		1703.8642	264					
DESCRIPTIVES		N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Mini mum	Maxi mum
						Lower bound	Upper bound		
Administrative productivity (1-10 scale)	Permanent	218	6.1147	2.5183	0.17	5.78	6.45	1	10
	Temporary	23	4.4348	2.0411	0.43	3.55	5.32	1	9
	Limited contract	22	6.0909	2.7587	0.59	4.87	7.31	1	10
	Other	2	7.5000	3.5355	2.50	-24.27	39.27	5	10
	Total	265	5.9774	2.5405	0.16	5.67	6.28	1	10

Table 4.36: ANOVA of self rated academic productivity (and data descriptive for administrative productivity) in relation to term of academic post

ANOVA in Table 4.37 below shows that there is no significant difference ($F = 1.05$, $p > 0.05$) in relation to academic rank in the academics' views on their teaching productivity, shown by the mean of teaching productivity. Every academic felt that they were successful in teaching. However, there is a significant difference ($F = 9.22$, $p <$

0.01) in relation to academic rank in terms of the academics' views on their research productivity, where the mean of research productivity rises with rank from tutors, lecturers, senior lecturers, associate professors, up to professors, and this pattern is, in fact, as expected. It is interesting here, therefore, to check and compare this self rated research productivity (as also shown by the box plot and error bar in Figure 4.37 below) with research outcomes reported (i.e. total number of publications produced according to rank). Figure 4.38 below is a simple presentation for this comparison. This figure closely follows the pattern of self rated research productivity, except where senior lecturers have, on average, a few more publications than associate professors, but the associate professors rated themselves as more productive. However, the little difference at this point is not of great concern as the value of publication mean of the senior lecturers (as shown in the error bar chart in Figure 4.38 below) has more potential error as the number of academics in this category is relatively small.

For the third academic role, again there is a significant difference ($F = 7.87$, $p < 0.01$) in relation to academic rank in terms of the academics' views on their administrative productivity, where the mean productivity of the professors is the highest (7.50) and that of the tutors/teachers is the lowest (4.22). This result is also as expected, as the wider experience of the professors is seen by them as advantageous in carrying out any academic administrative task.

ANOVA			Sum of squares	df	Mean square	F	Sig.
Teaching productivity (1-10 scale)	Between groups		8.08	4	2.02	1.05	0.38
	Within groups		537.64	279	1.93		
	Total		545.72	283			
Research productivity (1-10 scale)	Between groups		179.70	4	44.92	9.22	0.00
	Within groups		1359.21	279	4.87		
	Total		1538.91	283			
Administrative productivity (1-10 scale)	Between groups		184.02	4	46.00	7.87	0.00
	Within groups		1519.85	260	5.85		
	Total		1703.86	264			

DESCRIPTIVES		N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Research productivity (1-10 scale)	Tutor/Teacher	27	4.85	2.41	0.46	3.90	5.81	1	10
	Lecturer	153	5.59	2.28	0.18	5.22	5.95	1	10
	Senior Lecturer	26	6.65	2.23	0.44	5.75	7.55	2	10
	Associate Professor	57	6.74	2.14	0.28	6.17	7.31	1	10
	Professor	21	7.90	1.30	0.28	7.31	8.50	5	10
	Total	284	6.02	2.33	0.14	5.75	6.29	1	10
Administrative productivity (1-10 scale)	Tutor/Teacher	27	4.22	2.03	0.39	3.42	5.02	1	9
	Lecturer	143	5.72	2.51	0.21	5.31	6.13	1	10
	Senior Lecturer	24	7.13	2.15	0.44	6.22	8.03	3	10
	Associate Professor	51	6.49	2.62	0.37	5.75	7.23	1	10
	Professor	20	7.50	1.93	0.43	6.60	8.40	5	10
	Total	265	5.98	2.54	0.16	5.67	6.28	1	10

Table 4.37: ANOVA of self rated academic productivity (and data descriptive for research and administrative productivity) in relation to academic rank

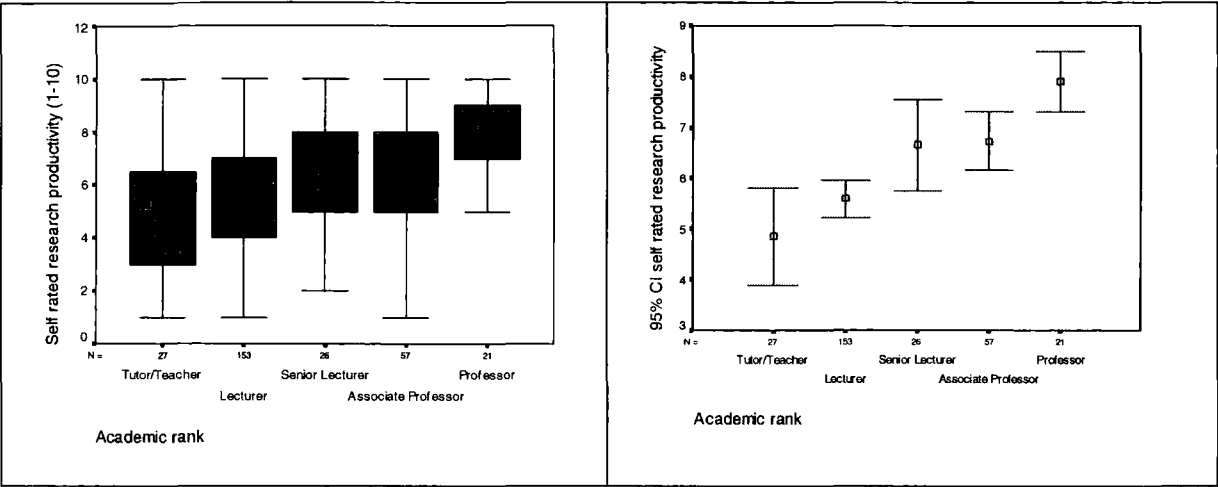


Figure 4.37: Box plot and error bar of self rated research productivity in relation to academic rank (No outliers or extreme cases on the box plot)

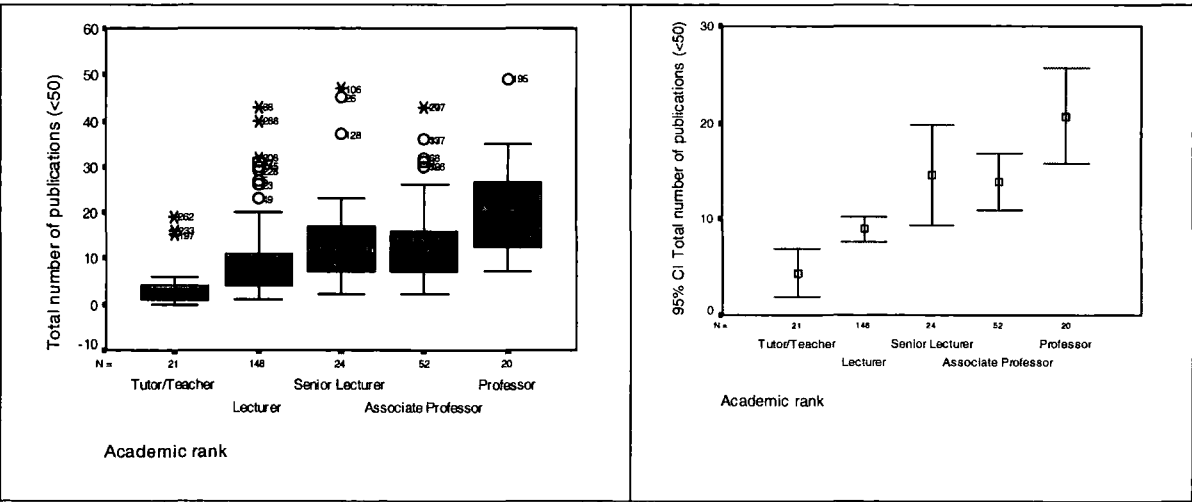


Figure 4.38: Box plot and error bar of total number of publications (limited to 50 publications) in relation to academic rank

ANOVA in Table 4.39 below shows that there is no significant difference ($F = 0.36$, $p > 0.05$) in relation to highest qualification in the academics' views on their teaching productivity, shown by the mean of teaching productivity. However, there is a significant difference ($F = 6.66$, $p < 0.01$) in relation to highest qualification in terms of the academics' views on their research productivity, where the means of research productivity of Doctorate graduated academics is the highest (6.59), followed by Master (5.68) and Bachelor graduated (5.00). Again, there is a strong significant difference ($F = 6.02$, $p < 0.01$) in relation to highest qualification in the academics' views on their administrative productivity, where the means of administrative productivity of Doctorate graduated academics is the highest (6.56), followed by Master (5.73) and Bachelor graduated (4.50). These data have shown a clear relationship between high academic qualifications and excelling in research and administrative posts.

ANOVA			Sum of squares	df	Mean square	F	Sig.
Teaching productivity (1-10 scale)	Between groups		1.40	2	0.70	0.36	0.70
	Within groups		542.72	279	1.95		
	Total		544.12	281			
Research productivity (1-10 scale)	Between groups		69.81	2	34.90	6.66	0.00
	Within Groups		1461.19	279	5.24		
	Total		1531.00	281			
Administrative productivity (1-10 scale)	Between groups		74.32	2	37.16	6.02	0.00
	Within groups		1603.66	260	6.17		
	Total		1677.98	262			

DESCRIPTIVES		N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Research productivity (1-10 scale)	Bachelor	14	5.00	2.94	0.78	3.31	6.69	1	10
	Master	157	5.68	2.31	0.18	5.31	6.04	1	10
	Doctoral	111	6.59	2.17	0.21	6.19	7.00	1	10
	Total	282	6.00	2.33	0.14	5.73	6.28	1	10
Administrative productivity (1-10 scale)	Bachelor	14	4.50	2.10	0.56	3.29	5.71	1	9
	Master	145	5.73	2.49	0.21	5.32	6.14	1	10
	Doctoral	104	6.56	2.52	0.25	6.07	7.05	2	10
	Total	263	5.99	2.53	0.16	5.69	6.30	1	10

Table 4.39: ANOVA of self rated academic productivity (and data descriptive for research and administrative productivity) in relation to highest degree

Table 4.40 below shows that, in research productivity, there is a significant difference ($p < 0.01$, $F = 6.16$) in relation to the quality of training received (self rated), where a very good quality of training had produced the highest research productivity with a mean of 7.28. Here, even though a very poor quality of training has the second highest productivity mean of 6.40, the data in this category does not represent a valid academic background as only five academics supplied data but with a high standard deviation of 2.51. There were 223 responses to both training factor and research productivity

questions, but 209 of them were spread over only three training categories, fair, good, and very good. Thus, the very poor and poor categories had very few cases in them and this is unacceptable in commonly accepted criteria for data interpretation.

On the other hand, there is no significant difference in teaching or administrative productivity in relation to quality of training received. Therefore, we can conclude here that academic training is related to research productivity but not to teaching and administrative productivity.

ANOVA			Sum of squares	df	Mean square	F	Sig.
Teaching productivity (1-10 scale)	Between groups		14.20	4	3.55	2.00	0.10
	Within groups		385.12	217	1.77		
	Total		399.32	221			
Research productivity (1-10 scale)	Between Groups		122.84	4	30.71	6.16	0.00
	Within Groups		1086.28	218	4.98		
	Total		1209.12	222			
Administrative productivity (1-10 scale)	Between Groups		49.31	4	12.33	2.04	0.09
	Within Groups		1234.49	204	6.05		
	Total		1283.80	208			

DESCRIPTIVES		N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Research productivity (1-10 scale)	Very poor	5	6.40	2.51	1.12	3.28	9.52	3	10
	Poor	9	5.33	2.00	0.67	3.80	6.87	2	8
	Fair	72	5.17	2.18	0.26	4.65	5.68	1	10
	Good	101	6.32	2.28	0.23	5.87	6.77	1	10
	Very good	36	7.28	2.21	0.37	6.53	8.03	1	10
	Total	223	6.06	2.33	0.16	5.75	6.37	1	10

Table 4.40: ANOVA of self rated academic productivity (and data descriptive for research productivity) in relation to quality of training received

4.3.2.3. Correlation between variables with interval and ordinal data and self rated academic role productivity (teaching, research or administration)

Data on self rated teaching, research and administrative productivity are treated as the ordinal data. In order to clearly understand the relationship between the various factors in this section, the Spearman’s rho correlation coefficient can be obtained for all variable relationships as shown in Table 4.41 below.

	Teaching productivity	Research productivity	Administrative productivity
Teaching productivity	1	0.11	0.19**
Research productivity	0.11	1	0.18**
Administrative productivity	0.19**	0.18**	1
% time teaching	0.25**	-0.28**	-0.26**
% time research	-0.06	0.59**	-0.14*
% time administration.	-0.11	-0.12*	0.55**
% time others	-0.06	-0.03	-0.04
Total courses taught	0.05	0.02	0.05
Total students taught	0.03	0.06	-0.09
No. of publications (<50)	0.02	0.49**	0.19**
Years holding highest degree	0.16**	0.27**	0.25**
Years in field	0.20**	0.21**	0.18**
Years in present university	0.15**	0.29**	0.20**
Years of professional employment outside university	0.09	0.01	0.08
Organisations belonged to (in Malaysia)	0.09	0.25**	0.23**
Organisations belonged to (International)	-0.11	0.24**	0.08
No. of people in household	0.07	0.17**	0.20**
Encouraging university environment	0.14*	0.15*	0.18**

N = 171 to 284
 * Correlation is significant at the 0.05 level (2-tailed) – [p < 0.05].
 ** Correlation is significant at the 0.01 level (2-tailed) – [p < 0.01].

Table 4.41: Spearman’s rho correlation values for the relationship between a number of variables and self rated teaching, research and administrative productivity

Results from the above table show that some statistically significant correlations are to be found between self rated teaching productivity and self rated administrative productivity, percentage of time spent on teaching, length of time holding the highest degree, length of time in present field, years of employment in present university and a conducive university environment. However, the correlation values shown for all of these significant relationships can be considered here as weak, except for that which involves the percentage of time spent on teaching which can be considered as in the range of modest correlation.

Even though, in general, none of these correlations is strong (though some of them are very significant), some common indicators can be identified here. One of them is that the academics considered themselves more productive in teaching when more time was spent in teaching, but the number of courses taught and the number of students taught was not considered relevant here. In a similar vein, the academics thought that being productive in administration made them also productive in teaching as shown by the significant correlation, but, in reality, if they had been spending more time on administrative tasks, they became less productive in teaching. In this context, maybe they were not referring to the quantity of time devoted to administration here when they said they were highly productive, but rather, the impact of it.

For productivity in research, results from the above show that there is a positive significant relationship between self rated research productivity and self rated administrative productivity, percentage of time spent on research, total number of publications (with data on more than 50 publications being omitted), length of time

holding the highest degree, length of time in present field, years of employment in present university, organisations belonged to in Malaysia, organisations belonged to internationally, number of people in household and the encouraging university environment. There are two negative significant relationships between self rated research productivity and percentage of time spent on teaching and percentage of time spent on administration ($r = -0.28$ and -0.12 ; $p < 0.01$ and $p < 0.05$ respectively). These significant correlations can be seen as stronger with a very significant p value and higher r . The significant results indicate some important relationships. Again, when the academics thought they were productive in administration, they thought they were productive in research too.

However, they were not referring to the amount of time devoted to administration in rating their administrative productivity as high here. This is because the more time they spent on administrative tasks the lower the research productivity. In fact, the high amount of time spent in teaching and administrative activities the lower their research productivity. As expected, the amount of time spent on research has a fairly strong correlation with self rated research productivity. Total number of publications is significant in indicating research productivity. The more organisations the academics belonged to, locally or internationally, the more productive in research they were. Organisations belonged to in Malaysia and internationally may have provided wider networking which increased the opportunity for research dissemination which is why these two variables have a strong correlation with research productivity.

For administrative productivity, results from the above show that there are positive significant relationships between self rated administrative productivity and self rated teaching productivity, self rated research productivity, percentage of time spent on administration, total number of publications (with data on more than 50 publications being omitted), length of time holding the highest degree, length of time in present field, years of employment in present university, organisations belonged to in Malaysia, number of people in household and the encouraging university environment. We can see here that high productivity in teaching and research is related to high productivity in performing administrative tasks in the university. Administrative tasks within the university deal with academic related matters, especially teaching and research, and as the academics are productive in these two roles, and understand the problems, this indirectly increases their overall administrative capabilities. There are two negative significant relationships between self rated administrative productivity and percentage of time spent on teaching and percentage of time spent on research ($r = -0.26$ and -0.14 ; $p < 0.01$ and $p < 0.05$ respectively).

In other relationships involving categoric variables and academic role productivity, the results show that a conducive university environment has a significant correlation with all self rated teaching, research and administrative productivity ($r = 0.14$, 0.15 and 0.18 respectively, with $p < 0.05$, 0.05 and 0.01 respectively). Family size or the number of people in a household has no significant correlation with self rated teaching productivity. This is irrelevant to job satisfaction. However, it has a significant correlation with research and administrative productivity ($r = 0.17$ and 0.20 , with $p < 0.01$ respectively).

There are some general points which can be made about the results in both the above tables. First, the number of academics in each relationship is not small which makes the generalisations acceptable and valid. Secondly, variables of length of time holding the highest degree, length of time in present field and years of employment in present university have significant relationships with all teaching, research and administrative productivity. Thirdly, in the roles of teaching, research and administration, the productivity of any of these roles would decrease with increasing time spent on either or both of the other two roles. Fourthly, of all the statistically significant relationships in the table, three of them have modest correlations ($r = 0.49, 0.55, \text{ and } 0.59$), and the rest all have weak correlations ($r = 0.29$ and below), so even though all of the relationships are statistically significant in correlation, they are of modest educational or substantial significance. In other words, the relationships can be argued here as modest importance. Lastly, it is implied from the views of the academics that teaching and research productivity have no significant relationship to each other. This outcome is in line with what has been reported by Hattie and Marsh (1997). They conducted a meta analysis looking at the relationship between teaching and research among academics, and their results showed the relationship to be very weak.

Multiple regressions can also be used to explore these relationships, and a linear model produced to predict teaching, research or administrative productivity by using all of the variables (which have at least an ordinal data) statistically selected as predictors. The variables under consideration are all from Tables 4.41 above. The predictors are selected for the final regression model by using a stepwise procedure in which “the variables are entered one by one starting with the one that has the highest correlation with the

dependent variable and then following with the one that contributes the largest increase in correlation value after the first one” (Williams, 2003 p. 148).

However, before running the regression, the outcome measures have to be scaled with a procedure to transform to normal distribution any skewed distribution data. This procedure is provided in SPSS, where data relating to each variable are squeezed to make their mean values very close to 0. This is very helpful because running the regression will be more valid using variables with a normal distribution. The new variables, all normally distributed, are then formed and a multiple regression run as usual using the new variables. As the stepwise procedure will produce different models in sequence steps, only the model which includes the maximum variables entered as independent variables will be used in each following regression.

In predicting teaching productivity, Table 4.42 below provides all the coefficients to form a regression model where teaching productivity becomes the dependent variable and two other variables become the predictors. Any other variables are excluded from this model in a stepwise procedure.

		Unstandardised coefficients		t	Sig.
Model		B	Std. error		
2	(Constant)	0.01	0.09	0.08	0.94
	Length of time in present field	0.25	0.08	3.07	0.00
	Percentage of time spent on teaching	0.27	0.10	2.74	0.01

* R = 0.36 for this model

Table 4.42: Linear regression coefficients Model 2. Teaching productivity is the dependent variable and the other two variables are independent or predictors. (All variables above have been transformed to normal distribution.

A regression model to predict the future teaching productivity of an academic can therefore be identified as:

[Teaching Productivity] = 0.01 + 0.25[length of time in present field] + 0.27[percentage of time spent on teaching].

In predicting research productivity, Table 4.43 below provides coefficients to form a regression model where research productivity becomes the dependent variable and three other variables become the predictors.

Model		Unstandardised coefficients		t	Sig.
		B	Std. error		
3	(Constant)	0.08	0.07	1.13	0.26
	Percentage of time spent on research	0.45	0.08	5.95	0.00
	Encouraging university environment	0.23	0.07	3.31	0.00
	Years in present field	0.19	0.06	2.98	0.00

* R = 0.62 for this model

Table 4.43: Linear regression coefficients Model 3. Research productivity is the dependent variable and the other three variables are independent or predictors. (All variables have been transformed to normal distribution).

A regression model to predict future research productivity of an academic is therefore identified as:

$$[\text{Research Productivity}] = 0.08 + 0.45[\text{percentage of time spent on research}] + 0.23[\text{encouraging university environment (with 5 options)}] + 0.19[\text{years in present field}].$$

Lastly, in predicting administrative productivity, Table 4.44 below provides coefficients to form a regression model where administrative productivity becomes the dependent variable and three other variables become the predictors.

Model		Unstandardised coefficients		t	Sig.
		B	Std. error		
3	(Constant)	-0.07	0.08	-0.93	0.35
	Percentage of working time spent on administration	0.56	0.08	7.28	0.00
	How long obtained the highest degree	0.18	0.07	2.47	0.01
	Composite measure of research productivity (total publications)	0.20	0.08	2.39	0.02

* R = 0.63 for this model

Table 4.44: Linear regression coefficients Model 3. Administrative productivity is the dependent variable and the other four variables are independent or predictors. (All variables have been transformed to normal distribution).

A regression model to predict future administrative productivity of another academic is therefore identified as:

[Administrative productivity] = -0.07 + 0.56[percentage of working time spent on administration] + 0.18[length of time holding the highest degree] + 0.20[composite measure of research productivity (total publications)]

4.3.3. The views of Malaysian academics on the appointment of professors

In answering this question more specifically, the academics were requested to give their views on how deserving the professors in public universities had appeared to be when appointed according to their productivity. (Academics could take into account their current professorial capabilities when giving their response). The response to this question was to give the percentage of professors who had appeared to be deserving. The professors evaluated were either in the faculty or in the university generally. Results as in Table 4.45 show that the academics felt 58.96% of professors in their faculty deserved their rank, whereas in their university the figure was 58.67%. A paired sample t test shows a non-significant result between these two ($t = -0.31$, $p = 0.75 > 0.05$) which means that of all the professors anywhere in Malaysian public higher learning institutions, only about 59% deserved to be appointed in the view of the academics. The rest, about 41%, seem to be appointed based on other criteria, a situation of which the government should be aware.

	N	Mean
% of professor deserving rank (in faculty)	251	58.96
% of professor deserving rank (in university)	235	58.67
Valid N (listwise)	229	

Table 4.45: Descriptive statistics – How deserving of rank are the professors

Interestingly, this perspective is common amongst academics across different ranks. Results of ANOVA in Table 4.46 show the non-significant difference on this ($F = 1.17$,

$p > 0.05$ and $F = 0.72$, $p > 0.05$ for the professors in the faculties and universities respectively). The non-significant difference is shown here even though the mean of the professors' views on this is still the highest among the other groups, but we can assume here that the differences are not great.

		Sum of squares	df	Mean square	F	Sig.
% of professors deserving rank (in faculty)	Between groups	6627.04	4	1656.76	1.17	0.32
	Within groups	347748.56	246	1413.61		
	Total	354375.60	250			
% of professors deserving rank (in university)	Between Groups	2746.60	4	686.65	0.72	0.58
	Within Groups	219997.51	230	956.51		
	Total	222744.11	234			

Table 4.46: ANOVA on how deserving of rank are the professors in the view of academics of different rank

The above ANOVA result highlighted the fact that, even among the professors themselves it was felt that quite a number of them did not deserve their rank. One way to widen the scope of this discussion is to also compare the results across the different universities as shown in the result of another ANOVA test in Table 4.47 below, in the faculty (top part) and the university (bottom part).

		Sum of Squares	df	Mean Square	F	Sig.
% of professor deserving rank (in faculty)	Between Groups	45290.93	5	9058	7.18	0.00
	Within Groups	307926.77	244	1262		
	Total	353217.70	249			
% of professor deserving rank (in university)	Between Groups	25809.35	5	5162	6.01	0.00
	Within Groups	195796.38	228	859		
	Total	221605.73	233			

Table 4.47: ANOVA on how deserving of rank are the professors in the view of academics of different universities

ANOVA in Table 4.47 above shows that there is a significant difference ($F = 7.18$, $p < 0.01$) in the academics' views on how deserving of rank are the professors in the faculty; and again, there is a significant difference ($F = 6.01$, $p < 0.01$) in the academics' views on how deserving of rank are the professors in the university. In showing a clearer picture of these differences, Figure 4.48 put this information in tables and charts. In terms of the percentage of professors in the faculty deserving their rank, the view of academics of UNIMAS brought the lowest mean on this compared from the other universities. In terms of the percentage of professors in the university deserving their rank, again, the view of academics of UNIMAS brought the lowest mean on this compared from the other universities.

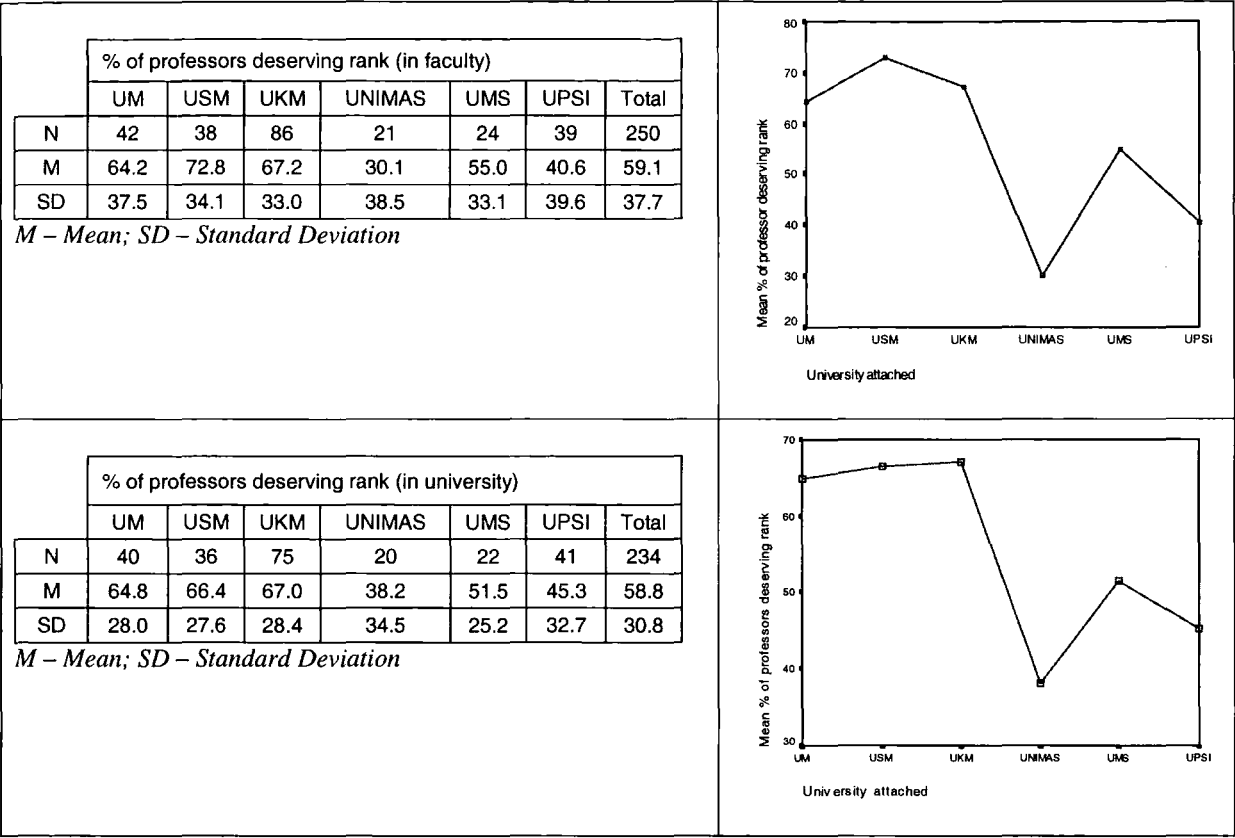


Figure 4.48: The mean percentages of professors (in the faculty (top), and university (below)) deserving their rank in the view of academics of different university

4.3.4. What is the level of knowledge of National Education Philosophy among Malaysian academics?

The different levels of self reported understanding of National Education Philosophy (NEP) among academics are explained in Figure 4.49 and Table 4.49 below, where most of them seem to have a fair or good understanding.

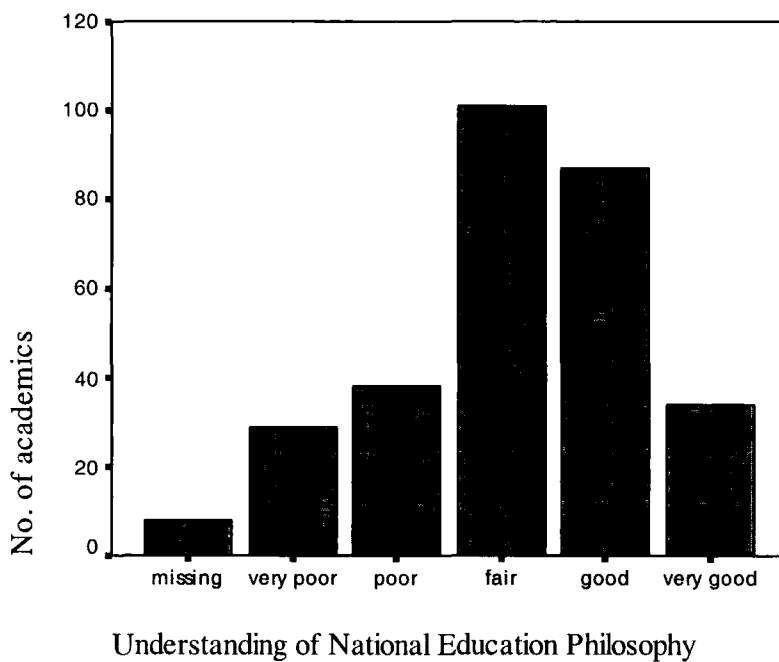


Figure 4.49: Bar chart in relation to understanding of NEP among academics

		Frequency	Percentage
Valid	Very poor	29	9.8
	Poor	38	12.8
	Fair	101	34.0
	Good	87	29.3
	Very good	34	11.5
	Total	289	97.3
Missing	System	8	2.7
Total		297	100

Table 4.49: Frequency table in relation to understanding of NEP among academics

Another way to analyse the data in regard to this is to look at the connection with other variables. In examining the relationships between these levels of understanding and

some other variables by using Crosstabs and valued by chi-square⁴⁴ (symbolised by χ^2) tests, the results are shown in Table 4.50 below. The whole table is a combination of 17 Crosstabs tables, where some of them are “ less likely to be valid in a commonly accepted criteria when more than 25 per cent of cells in the Crosstabs table have an expected frequency⁴⁵ of less than 5 ” (Williams, 2003: pg. 143). Therefore there are only four valid tables for Chi-square test here, where the first, third and forth of the valid tables of the relationships (i.e. level of understanding on NEP and 1) gender and 3) place of highest degree (Malaysia/overseas) and 4) two fields of expertise) show a non significant result in relationships. The difference in each level of understanding on NEP in relation to the category of the three variables were happened by chance or in random. In other words, there is no statistical difference between sexes, Malaysia or overseas as a place of getting the highest degree, and science or non science as field of expertise in their pattern of understanding NEP which have 5 categories, from very poor to very good.

Another one valid Crosstabs table of the relationships (i.e. level of understanding on NEP and 2) categories of university years of establishment) shows a significant result in relationship ($\chi^2=17.547$, $df = 8$, $sig. = 0.025 < 0.05$). This result interprets that there is a statistical difference between the academics in 3 categories of university years of establishment in their understanding of NEP (in 5 categories). The category of university years of establishment are more than 20 years, 10 to 20 years, and less than 10 years of establishment respectively. The χ^2 is big enough to make the two variables are related,

⁴⁴ This is a statistic “which measures the magnitude of the difference between the observed values and the expected values under the null hypothesis” (Williams, 1999 p.17)

⁴⁵ The count/frequency in each cell determined under the null hypothesis.

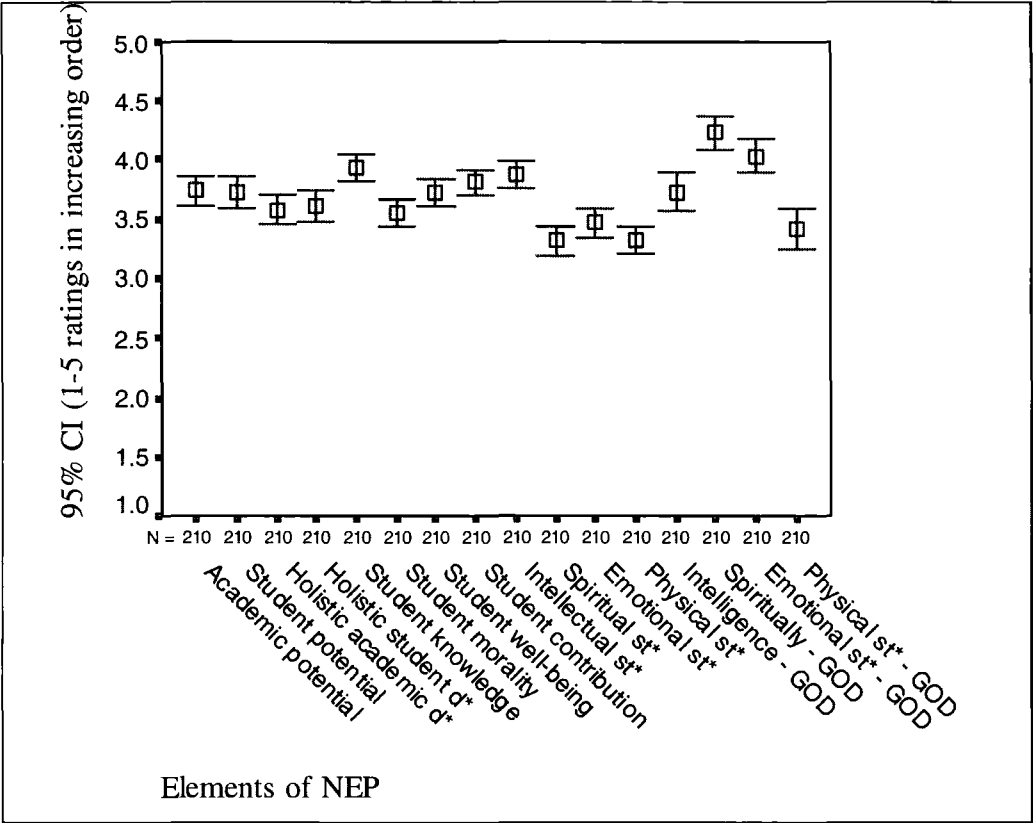
and therefore not independent to each other and reject the null hypothesis (which propose the idea that the difference happen by chance).

	Chi-square tests between understanding on NEP and a series of variables				
	Pearson Chi-square	N of Valid Cases	No. of cells (%) have expected count less than 5	df	Sig. (2-sided)
Gender (male/female)	7.205	288	0 (0%)	4	0.125
6 university attachment	38.109	288	10 (33.3%)	20	0.009
3 categories of university years of establishment	17.547	288	1(6.7%)	8	0.025
Marital status (married/single/widowed)	17.964	288	6 (40.0%)	8	0.021
Number of people in household	30.617	283	15 (37.5%)	28	0.334
4 terms of academic post	13.368	289	11(55.0%)	12	0.343
5 academic ranks	28.346	289	9(36.0%)	16	0.029
The highest degree possess	22.616	287	4(26.7%)	8	0.004
Place of highest degree (Malaysia/overseas)	5.021	288	0(0%)	4	0.285
Field of expertise (science/non-science)	9.397	287	0(0%)	4	0.052
Field of expertise relate/not to highest degree	4.676	287	3(30.0%)	4	0.322
7 groups of how long in this field	26.337	286	19(54.3%)	24	0.336
7 groups of years employed at university	21.904	285	19(54.3%)	24	0.585
6 groups of years employed in professional work elsewhere	34.542	266	20(66.7%)	20	0.023
5 scale of quality of training received	26.571	225	13(52.0%)	16	0.047
Discipline provides opportunities/not for career	8.112	286	3(30.0%)	4	0.088
Encouraging university environment/not	32.409	288	11(44.0%)	16	0.009

Table 4.50: Chi-square tests for relationship between level of understanding of NEP and 17 variables

4.3.5 How far and how successfully has NEP been implemented in HEI in Malaysia

This question can be answered by, first, looking at the 16 elements of Malaysian National Education Philosophy (NEP) and, in the context of Malaysian Higher Education Institutions (HEI), the level of achievement of each element from the perspective of the academics (see Figure 4.51 and Table 4.51). We can then combine all the elements to form a single composite measure to show the level of successful implementation in a single unit. In order to make this measure more specific, only responses about students, who are the major products of higher education, will be used. The composite measure will then be checked for validity by correlating it with responses to the question 'How well has the NEP in HEI been implemented in your institution?' This question asked for a general statement on the successful implementation of NEP in HEI.



Note: d* = development; st* = strength

Figure 4.51: Error bars to show mean comparison in relation to degree of achievement of each NEP element in HEI

	N	Mean	Std. Dev.
Development of academic potential	281	3.69	0.91
Development of student potential	272	3.72	0.97
Holistic academic knowledge development	275	3.52	0.92
Holistic student knowledge development	266	3.60	0.92
Knowledgeable graduates	284	3.95	0.77
Highly moral graduates	282	3.55	0.86
High personal well-being of graduates	283	3.71	0.78
Graduates able to contribute nationally	277	3.81	0.77
Intellectually strong students	280	3.87	0.84
Spiritually strong students	279	3.33	0.92
Emotionally strong students	276	3.49	0.90
Physically strong students	275	3.32	0.87
Intelligence based on belief in & devotion to God	267	3.69	1.17
Spirituality based on belief in & devotion to God	269	4.17	1.07
Emotional strength based on belief in & devotion to God	268	4.01	1.10
Physical strength based on belief in & devotion to God	256	3.39	1.32

Table 4.51: Mean comparison in relation to the degree of achievement of each NEP element in HEI from the perspective of the academics (in a rating of 1-5 in increasing order)

Of all the NEP elements, from the perspective of the academics, the one that has been adapted and implemented best in HEI is in terms of making sure the students feel that if their spiritual achievement is to be excellent, it must always be based on a firm belief in and devotion to God. The second highest is in terms of making sure the students feel that if they are to have emotional strength, it also must always be based on a firm belief in and devotion to God. It is accepted in Malaysia that the firm belief in and devotion to God is an important aspect to be integrated into any core national policy, and it is the highest element of the five 'rukunegara' (a national ideology).

However, the elements of NEP to ensure the students' spiritual and physical strength can be seen as lowest in achievement when looking at the mean. Whatever the achievements of these NEP elements compared to each other, in general, all of them are above the moderate level of achievement according to their means. All of them have five scales from one rising to five (from 'strongly disagree' to 'strongly agree'), and the means of implementation of the NEP elements range from 3.32 to 4.17. We can see from the mean, none of the elements have had very strong agreement as to their successful implementation or imposition as no means are close to the maximum of five.

The successful implementation of these elements has been evaluated on both academics and students. In order to combine all the elements to form a single composite measure, we will focus on the evaluation of students. In doing this, all of the above elements will be included except two, developing academic potential and holistic academic knowledge development. Then, in totalling the combined value scale (1-5) of the remaining fourteen elements for each respondent, the measure will indicate how far or how successfully has NEP been implemented in HEI in Malaysia in general. The histogram showing the distribution of this composite measure is shown in Figure 4.52 below. Even though the composite measure can become clearer when they were transformed into average (among the fourteen elements), so that measure will also be in the form of 1-5 scales, statistically, they could not form a good scale, as this measure might have different properties.

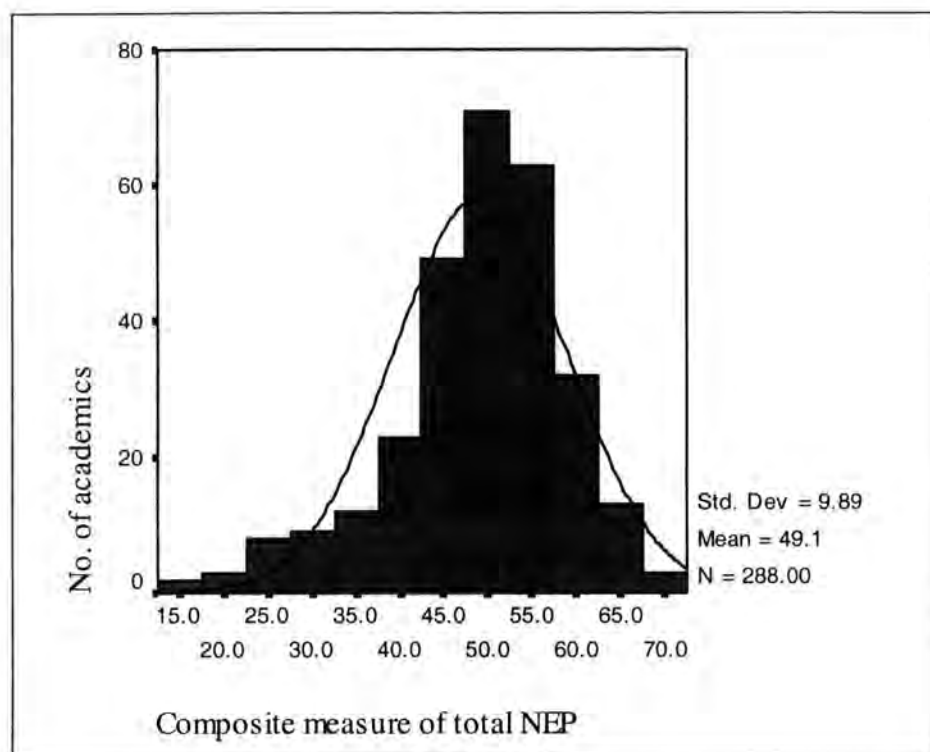


Figure 4.52: The distribution of the NEP composite measure obtained by totalling the scale of the fourteen NEP elements of each respondent.

The mean to this distribution of the composite measure is indicated here as 49.1 with quite a small standard deviation of 9.89. The distribution is negatively skewed (statistical skewness of -0.875). In trying to simply relate the mean value of 49.1 to the scale of 1-5, it is an average of 14 elements to make the value of 3.51. This value could indicate the moderate successful implementation of NEP in HEI is as compared to the 1-5 scale. As part of the validation process, this distribution will then be correlated with responses to the question 'How well has the NEP in HEI been implemented in your institution?' This question is in line with what is meant by the distribution in Figure 4.52 above. The correlation is expected to be very strong.

Statistically, by using the Spearman's rho correlation coefficient, the correlation between these two variables is very significant ($p < 0.01$, $N = 243$). However, the correlation value is not strong enough ($r = 0.489$). Therefore, in responding to every question representing each element in the questionnaire, the academics' perspective or opinion on the implementation of NEP in HEI here is considered as inconsistent. The respondents might have had the tendency to just tick towards the right hand side of some questions. In further elaborating this explanation to make it more informative, the correlation values of this relationship will also be checked on whether it vary by institution, the results on this is simplify in Table 4.53 below.

		How well has the NEP in HEI been implemented					
		UKM	UM	UMS	UNIMAS	UPSI	USM
Composite measure of total NEP	Correlation Coefficient	0.29**	0.47**	-0.05	0.17	0.53**	-0.06
	N	99	47	27	26	47	40

** Correlation is significant at the 0.01 level (2-tailed) – [$p < 0.01$].

Table 4.53: Correlations between composite measure of total NEP and the view on how well has the NEP in HEI been implemented in different universities by using Spearman's rho correlation coefficient

Table 4.53 shows that the correlations between the two NEP implementation indicators (the composite measure and how well the implementation) are significant at the 0.01 level (2-tailed) in UKM, UM and UPSI. However, there are a non-statistically

significant correlations between the two NEP implementation indicators to be found in UMS, UNIMAS and USM. The academics in these three universities are to be considered when the researcher noted about the inconsistent of giving their view about NEP implementation matters in the questionnaire.

4.3.6. What are the constraints for the effective implementation of NEP in HEI?

This question can be answered by looking at the various responses from different academics to an open-ended question. As their answers are gathered qualitatively, the analysis on them will be discussed in detail in Chapter 5 which will concentrate on qualitative analysis.

4.3.7. What is the relationship between the successful implementation of NEP and academic productivity?

This question can be answered by correlating variables detailing the success of the implementation of NEP in HEI with variables detailing academic productivity. There are two variables in the former which are used here, each of them can be seen as evaluating NEP implementation in a general sense. The first one is the composite measures of the total NEP elements, and the second one is the question 'How well has the NEP in HEI been implemented in your institution?'

For the latter, there are five variables which seemed appropriate, realistic and practical for the sake of this comparison. The first three variables are the self rated response on teaching productivity, research productivity and administrative productivity. The fourth variable was the single composite measure of teaching productivity indicated by the total number of courses taught, and the fifth was the single composite measure of total number of publications (with a number of publications of less than 50).

The correlations results for the relationship between the former and the latter variables are shown in Table 4.54 below.

	Composite measure of total NEP	How well has NEP in HEI been implemented?
Teaching productivity (1-10 scale)	0.06	0.05
Research productivity (1-10 scale)	0.02	0.08
Administrative productivity (1-10 scale)	0.16**	0.21**
Single composite measure of teaching productivity (by courses taught)	0.20**	0.06
Total number of publications (<50)	0.01	0.06

Table 4.54: Spearman's rho coefficient correlations. (Three values are indicated as ** meaning that those correlations are significant at the 0.01 level (2-tailed); (N = 221-281))

Except for the correlations between composite measure of total NEP and single composite measure of teaching productivity indicated by number of courses taught, and composite measure of total NEP and total number of publications (<50), all the other

correlations have at least one of their two correlated variables with ordinal data. The move to use the Spearman's rho coefficient correlation here is the safest way to deal with this.

Correlation results from the above table show that there are not many significant relationships between any of these variables, which means that, from the perspective of the academics, any level of implementational success of NEP in HEI does not really relate to academic productivity, except in two cases. The first one is the significant correlation between both the NEP implementation indicators (composite measure of total NEP and how well has NEP in HEI been implemented?) and self rated administrative productivity as a variable of academic productivity. The level of significance for both correlations is 0.01 ($p < 0.01$), with correlation values of 0.16 and 0.21 respectively.

It is implied here that, from the academics' perspective, there are significant correlations between both variables closely related to NEP implementation and administrative productivity. These significant positive correlations indicate that, when NEP was well implemented in universities, the administrative tasks assigned to the academics were running smoothly from the perspective of the academics. This might be for a logical reason – when the work produced by the academics and students is of a good quality resulting from successful NEP implementation, any administrative work conducted by the academics would be much simpler and more effective.

In this case, the direction of the correlation or relationship was assumed as this way (successful NEP implementation effect administrative productivity), therefore academic productivity did not affect NEP implementation here. This is because, even if the academics were productive in academic administration, despite nothing having been done to implement the NEP by the relevant academic authorities in the country (such as university management, education department, the ministry or the government itself), in the end, the level of NEP remained the same. Therefore, the NEP implementation could only become the independent variable here, and academic productivity dependent, not the other way round. However, even though both correlations are statistically significant, the correlation values of 0.16 and 0.21 respectively are, in fact, relatively low. So, the correlation values are not a strong enough base on which to improve the universities' academic administration.

In the second case where the level of implementational success of NEP in HEI did significantly relate to academic productivity from the perspective of the academics, it can be seen in the correlation between composite measure of total NEP and single composite measure of teaching productivity (total courses taught). Even though this correlation is significant here, nobody could immediately say that the initiative of implementing NEP well in HEI would increase teaching productivity in terms of quantity (particularly in number of courses taught) or vice versa. This argument is mainly based on the involvement of only one of two variables indicating the successful NEP implementation in HEI.

4.3.8. What is the relationship between the views on professorial appointment and the success of NEP implementation in HEI?

The answer to this question can be found in Table 4.55 below. The views of the academics on the percentage of professors deserving their rank are represented by the two variables on the left. To show the correlations with these variables, the successful implementation of NEP in HEI from the view of the academics is presented by the other two variables at the top of the table.

	Mean of composite measure of total NEP	How well has NEP in HEI been implemented
% of professor deserving rank (in faculty)	0.27**	0.19**
% of professor deserving rank (in university)	0.31**	0.16*

Table 4.55: Spearman's rho coefficient correlation. (Some values indicated as * and **, meaning that the correlation is significant at the .05 and 0.01 level (2-tailed) respectively (N = 203-250))

Of all four correlations shown above, two have involved the variable ‘how well has NEP in NEI been implemented?’ which is a type of variable with ordinal data. Therefore, the use of Spearman’s rho coefficient correlation here for all of the relationships is the safest way to deal with this situation because this correlation measurement can also apply to data at a higher level (the interval data). All the relationships between variables on views of professorial appointment and on views of NEP implementation have significant

correlations. Except for the correlation between ‘how well has NEP in NEI been implemented?’ and percentage of professors deserving rank (in university), which is significant at 0.05 level, the rest are even more significant at 0.01 level.

There is an important implication based on these significant correlations, where the higher the percentage given by the academics on how many professors actually deserve their rank, the higher the tendency for the implementation of NEP in HEI to become highly successful from their perspective. There is one way of explaining this. The higher the number of actual professors in the universities the more benefits to the universities when they use their scholarship and intelligence to continually develop the university to which they are attached. After all, the professors are the most important group among the academics in any university, normally holding the top administrative and management positions, becoming members of the university senate – the highest body of governance within the university, and having a strong influence in any decision making in the faculties. So, when many of this type of professor exist in the university, directly or indirectly, purposely or not, elements of NEP can easily be successfully implemented in those particular universities.

Another implication from the same significant result, is that, when there are fewer good professors in the universities, there are fewer people with full scholarship ability who can be relied upon to operate and run the university as a large academic entity in a highly effective way. When this happens, there is not so much scope for all the elements of NEP introduced by the government to be successfully implemented in HEI.

Correlations show how strong and significant are relationships but not the direction of causation, although here the arguments have provided exceptional evidence to show which variable causes another – it is the percentage of professors who deserve their rank that cause the successful implementation of NEP. However, this may not be accurate as it can be an alternative way of looking at the data. The academics may tend to respond positively to all questions that have been asked. In this case, we do not realise that a third variable may be involved here in providing the results of relationships. Enlightened professorial appointments can have a considerable effect on the implementation of NEP in HEI but they must be supported by other measures. They could not stand alone in the process of reviewing the NEP implementations because none of the correlation values in related findings can be seen as strong enough. Other evidence may be gained from future research.

CHAPTER 5

Qualitative Results

5.1. Introduction

This chapter will mainly discuss the analysis of qualitative data. In some parts, a few of the quantitative analyses have also been integrated, in order to support the qualitative analysis that applies in almost the whole chapter. All qualitative data come from the academics' responses to an open-ended question (Question number 32) in the questionnaire. This question was posed to help answer the third sub-question of the second research question of this research, concerning any constraints that can possibly hinder the process of implementing the National Education Philosophy (NEP) in Higher Education Institutions (HEI) in Malaysia. Data from this question, that provides the construction of the qualitative part in this study, complement the other two sets of quantitative data (as discussed in the previous chapter) in answering the first and second sub-question of the second research question respectively. All these data together, as they are all under the cover of the second research question, will therefore provide findings, arguments, and information concerning "to what extent does NEP exist in HEI in Malaysia".

Although the qualitative data in this chapter become part and parcel of the second research question of this research, it is not intended to look into every element of NEP in detail. (It is only suitable for those who are involved in reviewing the policy of the NEP.) Instead, it is open and free to any academic to comment in the question in the questionnaire concerning any constraint that could occur for NEP to be implemented in HEI, in regard to any element existing in the NEP.

Altogether, there were one hundred and thirty one out of two hundred and ninety seven academics who participated in this research, who have given their responses to this particular open ended question in the questionnaire in a variety of ways. There are various responses from different academics, with most of the responses appearing in the form of short sentences, some in point form, and some in even longer versions with a number of sentences. The following section (section 5.2) will discuss a few variables in conjunction with this cohort.

In order to explain why a qualitative approach is used in exploring the constraints of NEP implementation, and why a quantitative approach is used to obtain the other data, it is noted that commonly held opinions that suggest when we should use both qualitative and quantitative approaches. The orientation of a qualitative approach is more on data exploration, whereas quantitative is more on data testing (Rose, 1982). Study of any possible constraints on the implementation of NEP in HEI has never been done before in Malaysia. So conducting any study of this now could not prejudge what it is all about. Setting specific questions on this is not easy either, as there are no previous references on this topic. We can say here that getting data on constraints on NEP implementation is a type of exploration study in this instance, therefore it needs a qualitative analysis approach (and the approach used to make this 'exploration' work will be touched on in detail in section 5.3)

In contrast, the other data mostly dealing with academic roles' productivity and some relevant relationships and data required for this purpose are relatively straightforward. This also holds for questions about NEP - concerning the level of knowledge on NEP

and how far each element of the NEP has been successfully implemented, by using academics' perspective, also with some relevant relationships. For these respective variables, either they have been tested in the past or should be able to be tested. For those which have references in the past, it makes the specific questions in relation to this easier to set up in the questionnaire. In other words, the purpose of quantitative analysis in this research is then just to gain some empirical data by using some specific questions. It is used for gaining some important results and indicators involving a number of variables, and testing some possible relationships in answering the respective research questions in the context of HEI in Malaysia. In describing both qualitative and quantitative approaches, the researcher is therefore clear about the purposes of each approach to be employed in this study to gain the required results.

5.2. Some information on those who responded to the open-ended question

In knowing more about this cohort (131 academics who responded to this open-ended question in the questionnaire), a few details of their background need to be looked at, particularly the range of different institutions they come from, the different ranks of academics, and whether they are in the science or non-science field of expertise. It is necessary to identify at least those variables in order for us to be able to understand the context of all the qualitative responses as discussed in the following sections. This becomes the only quantitative part in this chapter, and it is summarily shown in Table 5.1 below. The three variables are also shown for every academic's quotation in the analysis of each category later on in this section.

	Academics in the sample				
	The respondents who responded to the questionnaire			The non-respondents	Total academics in the sample
Number of academics in relation to universities	Who wrote open-ended comments on NEP	Who didn't write open-ended comments on NEP	Total		
	131	166	297	403	700
UKM	41	60	101	100	201
UM	17	32	49	123	172
UMS	13	15	28	23	51
UNIMAS	13	13	26	46	72
UPSI	29	18	47	16	63
USM	18	27	45	96	141
KUKUM (strange)*	-	1	1		
*This academic may have wrongly stated his/her university, or he/she had just moved when the time survey was conducted.					
	Academics in the sample				
	The respondents who responded to the questionnaire			The non-respondents	Total academics in the sample
Number of academics by Academic Rank	Who wrote open-ended comments on NEP	Who didn't write open-ended comments on NEP	Total		
	131	166	297	403	700
Professor	14	9	23	39	62
Associate Professor	24	34	58	77	135
Lecturer	81	106	187	244	431
Tutor/Teacher	12	17	29	43	72
	Academics in the sample				
	The respondents who responded to the questionnaire			The non-respondents	Total academics in the sample
Number of academics by Discipline of Expertise	Who wrote open-ended comments on NEP	Who didn't write open-ended comments on NEP	Total		
	131	166	297	403	700
Science Related	52	74	126 - 131**	212 - 217**	343

Non-Science Related	77	89	166 - 171**	186 - 191**	357
Did not mention any	2	3	5***		
The range values appear here in considering the 5 academics (*) who did not mention their field of expertise					

Table 5.1: Comparing the respondents who wrote open-ended comments and those who did not, and all of them (as respondents to the questionnaire) with the non-respondents to the questionnaire.

Concerning the institutions of those who provided the open-ended comments on NEP, 31.30% of respondents are academics from UKM, 12.98% from UM, 9.92% from UMS, 9.92% from UNIMAS, 22.14% from UPSI, and 13.74% from USM. Among those institutions from which the academics come, the most encouraging responses to this open-ended question come from UPSI. This is based on two reasons - it was the second highest percentage of all 131 academics who responded to this open-ended question; and in addition to that, 46% of UPSI academics in the sample that the questionnaire was sent to responded to this particular open-ended question in the questionnaire. This 46% is a much higher proportion within the university in the sample, as compared to the others.

With regard to the rank of academics, as expected, most responses came from the lecturer group, followed by a group of Associate Professors, Professors, Tutors/Teachers, and Senior Lecturers respectively. The number of academics who responded is 74, 24, 14, 12 and 7 respectively. However, in order to associate them with the sampling procedure, lecturers and senior lecturers are combined under one group – a group of lecturers. There are then 81 academics who responded from this group. Now,

in comparing the number of academics who responded to this open-ended question in accordance with their group (81 - Lecturers, 24 – Associate Professors, 14 - Professors, and 12 - Tutors/Teachers) with their actual size in the sample (431 - Lecturers, 135 – Associate Professors, 62 - Professors, and 72 Tutors/Teachers), this makes 18.79%, 17.78%, 22.58% and 16.67% for the response rate of Lecturers, Associate Professors, Professors, and Tutors/Teachers respectively. This shows that, interestingly, the highest percentage in the sample who responded qualitatively to this open-ended question in the questionnaire came from among the professors. They seemed keen to give their valuable perspectives, which related to their valuable experiences.

On the other hand, there are two categories in this research (as suggested by the researcher before) that all the academics fitted into - Science or non-Science related discipline of expertise. Among those who responded to this open-ended question in the questionnaire, there were fifty two academics in Science related disciplines and seventy seven academics in non-science related disciplines; the other two did not mention their field of expertise. In evaluating them from the beginning, of all seven hundred academics in the sample, three hundred and forty three are in science related disciplines, while three hundred and fifty seven are in non-science related disciplines. From those in science-based disciplines, at least* 36.73% responded to the questionnaire, and from these, at least[±] 41.27% responded to the open-ended question. On the other side, in non-science-based disciplines, at least* 46.50% responded to the questionnaire, and from

* This is because it could be more than this as there are *five* academics have not mentioned anything about their field of expertise at this stage.

* This is because it could be more than this as there are *two* academics have not mentioned anything about their field of expertise at this stage.

these, at least[±] 46.39% responded to the open-ended question. We can see here that those in non-science related disciplines have more tendency to answer the survey questionnaire, and even this particular open-ended question.

5.3. Discussion on how qualitative data obtained in the context of this research forms a type of exploration study

The discussion in this section will justify why I have this qualitative aspect (when in this study, it includes the move to explore the constraint of NEP implementation in HEI) in order to become more sophisticated in explanation. There is no specific way of analysing any particular type of qualitative data, as it depends mainly on a qualitative researcher's own style, based on his or her professional judgment (McMillan & Schumacher, 1997). The following explanation in this section is to justify and argue the approach the researcher uses to analyse qualitative data in regard to this research that he is conducting.

These data, which are for answering a sub-question of a research question of this study, are all about constraints that occur during the process of implementing NEP in HEI. Data provided by all respondents in responding to an open-ended question, when considering all of them together, will provide a holistic input. This is because everyone was free to express any constraints which occurred, without any specific limitation, by using their own perspectives. Dealing with this kind of large variation in content (which is therefore in exploration direction) is not easy, even when they are referring to the

same domain or concept, especially when taking into account the one hundred and thirty one academics who responded. In regard to this, the researcher follows some steps suggested by McMillan and Schumacher (1997), as to what process should be conducted first, before proceed further with the analysis. In sequence, the steps would be 1) go through all the data to gain a general sense' 2) interpret them into smaller units of data, and 3) identify a number of common categories such that all the data can fit into one of them.

In line with this, according to Silverman (2000), the categories of qualitative data established should be based on the actual responses given and not be set-up using preconceptions, as it deflects attention away from the 'uncategorised data or activities. So the researcher produced the categories only after obtaining all the responses, then going through the process of analysing them one by one, keeping in mind what the actual pattern of response data was going to look like.

This procedure is a type of Grounded Theory technique, which specifies some effective strategies that can make the process of data collection more systematic and accurate, in any method of data collection (Charmaz, 2005). According to Charmaz, the way it works is by starting to categorise each response as they are being studied, not basing them on categories which have been prepared earlier (before data collection). This technique makes us think in more depth about the data, in the process of exploring any specific categories that should actually be discovered in this research.

The aspect of exploration is therefore stressed in this research. Even though this research, in exploring a number and types of categories of responses, is adopting a pragmatic approach, in that this method is not closely following any particular paradigm, nevertheless this approach has its own merit in being fit for the purpose of this research. After all, any kind of qualitative exploratory research is very useful when its findings, which are newly gained, can stimulate more important related research in future (Freebody, 2003). However, this can only happen when the exploratory research achieves the accepted aims of identification, description and explanation-generation (Miller & Crabtree, 1992). In looking at how the qualitative data are organised in this research, and at the same time how the data can be fitted according to this suggestion, the data show what are the existing constraints, represented by identified categories of constraints. All data in each category are described so that they become informative, important, and contributable to further action. Also, an explanation can be generated when understanding how many categories or constraints (looking at their variation) are commonly in existence nowadays, which one is thought of as more important than another, and how do any other available variables relate to the existence of any of the constraints.

5.4. Approaches used in the process of analysing all the response data

Data for this question are analysed qualitatively, with all responses first sorted into common categories in regard to some particular themes. Then part or the whole response of each respondent were assigned into the different categories, though the response of an

academic may contribute to more than one category. This approach becomes part of the method of analysing the data in at least two educational research projects that have been conducted. One of them was conducted by Larsen-Pusey (1988) in looking at the perspectives of academics concerning higher education in Colombia, and another one was conducted by Wong (2004) in evaluating students, teachers and laboratory managers concerning their perspective on their training curriculum. Therefore, these categories are not discrete in that an academic's response can go into more than one category.

It does not really matter to the researcher if a number of academics mention more than one category. In the case of some available conducted research, it was concluded that respondents who mentioned more than one category in giving their perspective about a subject could be demonstrating a more sophisticated conception. In the context of this research, however, those academics could not be considered sophisticated with respect to their concept of NEP in HEI. This is because they were giving their perspective in terms of opinions on what constraints could happen along the process of NEP implementation, and they did not even have to know and understand in detail what NEP was - they could give these perspectives based on their observation and experience. Furthermore, lengthy replies which they gave could be related to their emotion (maybe expressing their dissatisfaction), and also their initiative (maybe not feeling too lazy to answer) at that time. Therefore, this pattern of outcome did not matter to the researcher.

Each of the categories was formed based on a different common ground that could group some of the responses together. It is a limitation when part or the whole response,

because of its multi-dimensional explanation, could go into more than one category, but for the purpose of this analysis, it went into the category in such a way as to complement the smooth flow of explanation of that category from other data, and then be fitted together to each other well in that category for a common ground. The process finished with the identification of frequency for each category, and how many academics they came from. “Frequency” means how many times the various elements of each category were mentioned, so there are cases where some academics produce more than one “frequency” in the same category.

In term of the language used by respondents, 72 out of 131 respondents, (meaning more than half who responded to this open-ended question) expressed their perspectives in Malay, while the rest were in English. Responses in both languages were dealt with equally in the sense that they were identified as to which and how many categories they were to be attached to. In each category, the set of related responses contributes to the flow of explanation, regardless of the language used. In dealing with this issue, the only different treatment given is that responses in English are quoted directly but those in Malay are quoted as a translated version. Any translated quotes are marked as ‘translated’.

The procedures described above resulted in Table 5.2 below, which provides a summary of what categories of responses are formed, with their respective frequency and the number of academics. The number of academics is included here because the frequency for each category only refers to the number of times a point was mentioned, without knowing exactly how many academics mentioned it.

In discussing on whether a saturation point has been reached in analysing the data, in term of there being no more categories or themes to come out of the data, the researcher believes that the data is indeed saturated. This is because all responses have been allocated to a particular category, and there are only a few responses (or parts of them) from different academics which have been left out - but this was because such responses were vague, incomplete, or do not really address the question.

No.	Categories (representing different constraints raised by the academics)	Frequency (number of times the categories were noted)	No. of Academics who noted each category
1.	Too many burdens that create time consuming constraints (high teacher-student ratio, academic and administrative responsibilities, etc.)	28 [23,28,30,36,38, 54(2X),65,86,108,109, 125(2X),151,168, 177(2X),183,206, 219(2X),237(2X), 253(2X),259,266,274]	22 [23,28,30,36,38, 54,65,86,108,109, 125,151,168,177, 183,206,219,237, 253,259,266,274]
2.	Lack of exposure to and implementation of NEP and how to overcome it.	27 [5,9,15(3X),16,29,42, 66,103,114,123,133,162, 194,202,228,234,235, 241,252,258,267,270, 278,283,286]	25 [5,9,15,16,29,42, 66,103,114,123, 133,162,194,202, 228,234,235,241, 252,258,267,270, 278,283,286]
3.	Political and ideological influences inside or outside the universities involving policies, administration, etc	25 [4,17,20(2X),34,43, 56,62,81,87(4X),88(2X), 89,92(2X),108,127,155, 171,223,249,269]	19 [4,17,20,34,43, 56,62,81,87,88,89, 92,108,127,155, 171,223,249,269]
4.	Less effective in the university system	24 [9,10,22,50,96,102, 103,107,135,173, 182(2X),185,194,206, 222,224,233,236,246, 271,276,290,294]	23 [9,10,22,50,96, 102,103,107,135, 173,182,185,194, 206,222,224,233, 236,246,271,276, 290,294]
5.	Bureaucratic constraints	15 [43,54,78,104,149, 157,218,232,237,249, 255,272,281,293,295].	15 [43,54,78,104, 149,157,218,232, 237,249,255,272, 281,293,295].

6.	The universities' orientation is less focused in providing a more holistic and integrated learning experience, including moving towards building up the students' critical thinking	11 [1,25,112,125,129,177,207,210,232,264,288]	11 [1,25,112,125,129,177,207,210,232,264,288]
7a*	Financial, logistical, resource and technical constraints.	10 [1,12,43,74,95,152,155,183,188,296].	10 [1,12,43,74,95,152,155,183,188,296]
7b*	Constraints in implementing and integrating religious elements	10 [19,139,149,151,199,234,243,244,288,297]	10 [19,139,149,151,199,234,243,244,288,297]
9.	Majority of students target only for paper qualification but ignoring the real knowledge culture and ethics.	4 [14,15,200,273]	4 [14,15,200,273]
10.	Works are career achievement and not knowledge development oriented for most academics.	3 [15,73,108]	3 [15,73,108]
11.	Some courses are not being taught by the right academics as they have different expertise	3 [9,14,219]	3 [9,14,219]
12a*	Poor standard of English language amongst students and even amongst some academics.	2 [273,274]	2 [273,274]
12b*	Poor quality of students who enter universities, where they were not developed enough in schools	2 [107,140]	2 [107,140]
12c*	The academics don't have a good relationship with the practitioners elsewhere outside the universities.	2 [51,82]	2 [51,82]

* Similar numbers to each other to show a similarity in sequence in the table because of having the same frequencies of responses.

Table 5.2: Category of problems or constraints which the academics think are faced by them in implementing the objective of NEP in HEI, the frequency (number of times) mentioned, and number of academics. Numbers-in brackets in column 2 and 3 refer to respondents number 1 to 297 who responded to the survey questionnaire. Any 'X' in

column 2 mean that the category has been referred to more than once by the same academic.

There are some arguments in addressing the question of reliability of this qualitative analysis, particularly in terms of the formation of the different categories (after interpreting and filtering the gathered data) by using the researcher's judgement and subjectivity. A question can be raised on what are the criteria that become the basis for the formation of each category of responses and furthermore, how has the researcher chosen which response goes to which category. The reliability issue is demonstrated here when another person who is given the same data and then asked to design categories and assign the responses or comments into the categories will either achieve the same result as the researcher has done, or not. It is a question of whether somebody else will design different categories.

In explaining this, the researcher admits that there may be a reliability problem. However, there are some suggestions in response to the issue of reliability raised here. One possibility is to ask other people to make categories and then assign the responses accordingly using the same data, and then try to match the results with what has been done by this researcher. However, this procedure requires much time for another phase of study, which the researcher does not have at present. Another suggestion is to justify what has been done by the researcher to set out the categories and assign the comments accordingly. What the researcher did was very straightforward - the categorisation is simply based on the comments given. That is why fourteen categories have been formed,

in trying to closely present all responses. By using this technique, other people also can easily understand the comments or responses of each academic in the same way, and may form similar categories to those of the researcher.

After all, the reliability of each category that has been formed is not really a question here, because what is important is that whatever is raised by the respondents, will be accepted and then discussed by the researcher. Only the details of explanation may be different if other people do the same thing with the responses, but the respondents' messages have been highlighted and people who read this kind of exploration research can react to them accordingly. Furthermore, Robson (2002) suggested that any qualitative analysis is open to a list of deficiencies, one of them is of course a question of reliability. According to her again, to minimise this risk, one of the approaches that should be used is to go through all data and then identify similar themes (in their respective categories) before taking anything out for further analyses. This approach has become one of those possible approaches that she suggested, and the researcher used and adapted this approach intensively in this research. Therefore it is hoped to reduce any inconsistencies in evaluating the data. In this case, the move to categorise all data under the respective themes has otherwise helped to increase reliability.

Another way of achieving reliability in the context of this research, which requires the process of collecting data to be consistent over time, across researcher and methods, is as suggested by Miles and Huberman (1994). In making this concept clearer, Manning (1982) suggested a way of identifying how every source that contributed to the instability in collecting the data could be controlled. According to them, the most

common sources will be the researchers themselves or any other parties who make the observations; the process involved in collecting the data; the participants to the survey research; the situations involved; and how the researcher interpret data they gain. In connecting this research with their suggestions, the condition for repeated observation to be consistent is achieved here, since the researcher alone conducted all the data collection. The process is also consistent in that all online response data was returned to the researcher in the same way by the respondents clicking the submit button – easy, fast and into the same place, ie the researcher’s incoming email box. In addition, the prospective participants are closely representative of the population, as they come from a group which has been properly sampled.

The only inconsistent part that can contribute to the reduction of reliability is when data are interpreted in a way that can be questioned, as mentioned earlier in this section. However, the researcher has justified why this procedure has been conducted. After all, “ways to develop and improve validity and reliability have not been well addressed in the literature of qualitative analysis and they are not valued by many qualitative researchers in many cases” (Manning, 1982). What is more important here is the useful information which the researcher is going to obtain from the open-ended question (for an exploration study approach), without being limited by any specific method of analysis.

5.5. Discussion and explanation of some uncommon approaches used and disadvantages in this data analysis

Qualitative research involves a process of collecting data on human experience within a system that they are part of; therefore it requires an interpersonal relationship (the most common is face-to-face interviewing) for gaining as much data as possible (Silverman, 2000). In adapting internet methods for collecting data qualitatively, to make sure it fits in with more traditional modes of data collection, one needs to be very sophisticated in approach, for example to conduct it via video conferencing by using internet technology, which is very expensive (Kennedy, 2000). In the context of using just a basic procedure for conducting research using the internet for qualitative data at a minimal cost, this initiative (even though still using a new technology) is admitted as have some limitations (Mann & Stewart, 2000).

One of the issues of a problematic nature involved in this kind of research is that of data tending to be received by one way communication. Data therefore have less tendency to be verified further by using follow-up questions via the internet, because if it done, the researcher is not sure whether they will reply again. In the context of this research, the chances for reply were even more slim as the respondents had already received three internet email messages before. This could make them become irritated with other follow-ups, especially when the third message had given an indication that they would not be contacted for the sake of data collection any more. Getting further responses can be done in other future research (when the respondents are being asked for some other follow-up questions, either by using the internet again, by telephone interview, or even

by going and visiting them for a face-to-face interview). But this would have involved a different research design, and also when this kind of data was the main focus of the research.

In the context of this research, this chapter just acts to support some quantitative data assessing the implementation of NEP in HEI, besides providing some additional information. It explores some constraints that can occur concerning the implementation; for studying more detail about each of the constraints, it seems that this will be required to be conducted in other future researches. This is why in this research, data is presented quite descriptively, noting the category of constraints without much literature especially in the Malaysian context, as it is a new initiative in examining this issue. Also, because it is an exploratory approach, the categories do not have broad descriptors as to why they are being referred to. Furthermore, as the nature of a qualitative analysis is complex and subjective since it depend on a researcher's interpretation and nature of studies (Denzin & Lincoln, 2005, Mann & Stewart, 2000), the kind, level, and number of categories, and how they are presented in the context of this research, will vary if other people conduct the same research. However, this exploration, as it is conducted online, should still have some useful features, for example in managing to gathering data that has never even been touched on before, and this is in line with what Mann and Steward (2000) suggest in conducting any internet based survey.

5.6. Reporting qualitative results in regard to some categories identified

This section will discuss responses in regard to each category. The sequence of each category here follows the number of times it is mentioned by the academics, in descending order. In addition, for every category that has been set up, there is a flow of discussion in explaining in depth the condition and background of occurrence of each category in the context of HEI in Malaysia. The comments that are relevant in the flow of explanation will therefore be quoted.

Prior to that, the direct quotes (which are in English) were edited or corrected slightly only in terms of sentence construction and not the content, and responses in Malay have been translated (to become translated quotes). For those quotes (direct and translated), the researcher is quoting directly (in reporting them) in the rest of this chapter. Even though most of them (in regard to particular categories) seem to be as quoted, not all quotes in this data are reported, or are shown. The main reason for them to be quoted is to provide examples that illustrate the point being raised. In this case, there are some responses which are left out for some good reasons, either as they duplicate other responses, or because the responses did not fit into any category, or even because it was unclear as to how they related to any possible categories or themes.

Group of words in italics in brackets within the quotes are from the researcher, to explain what are the partial comments referred to (or just a note) by looking at the rest or the whole of the particular comments. Some indications of respondents' backgrounds will also be provided at the end of each set of quotes, and represented as [Response number, Rank, University, Science/Non Science]. Response number is 1 to 297 for the first to the last academics who filled in and submitted the survey questionnaire; Rank is for the Tutor/Teacher (T), Lecturer (L), Senior Lecturer (S), Associate Professor (A), or Professor (P); University attached is UM, UKM, USM, UNIMAS, UMS, or UPSI; and Science (Sc) or Non-Science (N) refers to the only two major categories of disciplines of the academics.

There are some relational patterns in the data that are believed to be relevant to the responses. As the approach to the analysis of this qualitative data is more in terms of exploration, a few variables also want to be evaluated in terms of whether they appear to impact on the academics' perspective concerning any particular category of constraints of NEP implementation in HEI. The kind of data obtained for any particular subject matter (in this case the categories), inevitably, will tend to be different at different levels for any variable appearing in it (Aiston et al., 2002). In each category, the exploration of the relationship is done, so that we can compare the existence of certain variables in that category with their existence among all 297 academics who responded to the questionnaire (discussed in the quantitative chapter previously.). At this point, the most appropriate variable to be touched on clearly here seems to be gender, as the proportion of 297 respondents is almost equally divided in regard to gender, where 48%

respondents are male and 52% are female. Therefore, in almost every category, the pattern of gender will be looked at.

In the rest of this chapter, the headings of every sub-sections (of section 5.6) will use exactly the same numbers as the item in Table 5.2, but placed behind 5.6 (for example 5.6.1, 5.6.2, 5.6.3, ..., 5.6.7a, etc.). In addition, the researcher will use the same phrases (in mentioning categories) that appeared in the table.

5.6.1. Too many burdens that create time consuming constraints (high teacher-student ratio, academic and administration responsibilities, etc.)

The most common factor affecting the implementation of NEP in HEI raised by the academics concerns the significant burdens that create time consuming constraints faced by them such as the high teacher-student ratio, and too many academic and administration responsibilities. Surprisingly and interestingly, there were twenty two academics in the sample, which is quite a large number relatively speaking, who expressed views which involved worries about the limited time they have for conducting their roles, and therefore in implementing the NEP as well. From them, this problem has been mentioned twenty eight times. First, there were four academics responding to the question who expressed their opinions on having too much time spent on administration, the examples are as taken from the views expressed by three of them:

“To much time spent on administration, more time should be devoted to things that matter” [23, L, UNIMAS, N];

“Too many administration responsibilities, management do not know the importance of the academics” [65, L, UPSI, Sc];

“The problem in having a lot of administration tasks. It is difficult to increase the effort to add knowledge” [86, L, UM, N].

An academic gave an example of how the administration burden could look,

“too many meetings and events that can be done without but was made compulsory most of the time” [30, L, UMS, N].

Second, there were seven academics who responded to the questionnaire who expressed their views related to a large amount of time spent on teaching as stated below:

“..... Business at work due to the increasing number of students” [54, L, UNIMAS, N];

“The university not be able to implement NEP fully because the academics are forced to complete syllabus, so only deliver the course for the sake of giving knowledge (*limitedly*)” [125, L, UPSI, N];

“I think the academics presently are burdened with too much teaching work to the extent that there is no more time for doing research or contributing to the implementation process of NEP in HEI(translated)” [177, L, UM, N];

“We are required to teach at least two core subjects per semester. At the same time, we are also required to do research. If at the same time, when our focus is also needed to prepare lecture materials, especially for the new subject teaching (not in our own field), the whole process, which include teaching and

researching, will be (*even more*) disturbed (translated)” [219, L, UNIMAS, Sc].

“there is a lack of transparency in many things, for example in lessening the teaching burden(translated)” [237, L, UPSI, N];

“In my opinion, NEP could not be fully implemented in HEI because of firstly – the high number of students making the NEP not holistically efficient, and secondly – (*teaching*) burdens on the academics(translated)” [253, T, UPSI, Sc];

“Too many courses and too many students, yet too little time available” [259, A, UMS, N];

From the above comments, we can generalise by pointing to the burden of teaching which is indicated by the high number of students and courses taught. The problem remains still in HEI nowadays, for example if the teacher-student ratio keeps on increasing without quick action, as suggested by three academics,

“ teaching load in universities should be lessened by employing more tutors” [206, L, UPSI, N];

“Not enough hours in a day to do all. More human resource development needed” [266, L, USM, Sc];

“..... Another problem is the high teacher-student ratio. There should be an increase in teacher/academic staff intake to cope with the increasing number of students” [274, T, USM, Sc]

In fact, the problem of poor teacher-student ratio becomes more critical and crucial today when it affects the overall performance of HEI in Malaysia, the recent indication

being as reported recently, that this problem has become one of the aspects that greatly decreases the ranking of two universities in Malaysia in world university ranking as achieved in the last year (Ince, 2005). Ince added that one of the universities even dropped out of the list of 200 top universities.

Lastly, there is also a comment by an academic which expresses the burden of an academic's existence in general:

“..... the burden of too much work is that makes the academics not be able to contribute more time to educating the students (translated)” [183, L, UMS, N].

Gender appears to impact on the academics' perspective on the burden constraint. Male academics seem more concerned with this issue, where from 22 academics who indicated this kind of constraint, 14 (63.64%) are male academics.

5.6.2. Lack of exposure to and implementation of NEP and how to overcome them.

It is commonly understood in the context of higher education that many academics are not exposed to NEP so that they do not understand how to implement it, compared for example to teachers in schools, as according to nine academics:

“The academics lack exposure to the concept of NEP, compared to those teachers in schools (translated)” [9, A, UKM, N];

“There are some academics who were not originally teachers and *(therefore)* they have not been exposed with NEP in detail (translated)” [114, L, UPSI, N];

“we have usually not been given a course/briefing (*on NEP*), and only know about this through reading/conversation (translated)” [123, L, UKM, N];

“.....need to increase the academics’ understanding of NEP so that they can interpret it for the students, and this is especially for the academics who have not previously been teachers in school (translated)” [194, L, UPSI, N];

“I think many academics do not appreciate and understand the demand of NEP and how to implement it. So staff training and development for that purpose is very important (translated)” [234, L, UKM, N];

“Academic staff themselves are not competent in these” [241, A, UM, Sc];

“The NEP objectives have been focused only on school education and not at university level. HEI has not bother about this (translated)” [252, S, USM, N];

“Most Dean and Head of Department are not aware of NEP in HEI. In fact university should have a course for new appointments to administrative post. They must also understand the government policy and visi in education.” [267, A, UKM, N];

“Limited knowledge about NEP and HEI” [278, L, USM, N].

Four of the above responses directly confirm the situation in Malaysia where only teachers in school have been exposed to NEP through their teaching training. However, being sufficiently exposed to NEP in schools does not necessarily mean someone will appreciate the NEP or have features as required by NEP when they join the HEI, as viewed by an academic:

“Along my service in Education Faculty, I observe that not many new academics (new generation) appreciate NEP or have features as required by NEP, even though they have once become a teacher in school” [15, L, UKM, N].

Some academics have never even heard about the concept of NEP, as according to four academics:

“I do not know this NEP. What are the policies? I think this is the first time I heard of this” [16, L, UNIMAS, Sc].

“..... I think most of us are not aware of NEP in HEI and play no role in implementing the objectives of NEP” [103, L, UKM, N]

“Not really stressed, the NEP itself is an alien to us, very few understand and know it” [133, L, UM, Sc].

“I was not aware of them. In fact, this is my first encounter” [258, T, UMS, Sc]

In another example, which shows how wrong the understanding on NEP among the academics is, one of them said:

“why NEP, merit system is better” [66, L, UNIMAS, N].

Merit is related to the procedure of student intake to the university, whereas NEP relates to the process of knowledge development. The former is a technical approach, and the latter a philosophical one. They are not comparable to each other.

In feeling worried about the shallow understanding of NEP among the academics that can affect the students, five academics expressed their particular views on this and gave suggestions:

“.....suggestion - courses on human development and how to understand NEP should be conducted and evaluated from time to time. It is a typical human character trait to always need reminding.....(translated)” [15, L, UKM, N].

“During induction sessions in all universities, the newly appointed young lecturers must be exposed to NEP and their understanding of this has to be assured. They should show their commitment to successfully implementing the NEP in their teaching before being confirmed at their post, or promoted (translated)” - [29, P, USM, N]

“(problem on) the implementation of NEP in the academics themselves in Malaysian HEI all new academics should be given an educational course with a gratuity at the end such as a diploma, certificate, etc. (translated)” [228, L, UPSI, N]

“NEP should be implemented and reflected through syllabus and curriculum” [270, L, UNIMAS, N].

“NEP in HEI should look the grass roots problem not only focus on superficial level” [286, L, UPSI, N].

However, there are some indications to show that the academics know the NEP pretty well, even though if they are not always able to implement it. Two examples indicate this:

“Since I became an academic, I realise the importance of NEP, but there are conflicts in its implementation(*for example*) on how I and my colleagues who share the same thoughts as me can implement the NEP in the examination system (translated)” [15, L, UKM, N];

“..... the goals of NEP look noble and localised - but the measures of performance are global/universal/western - need to strike a balance where national goals are more localised, but societal demands and international relation demands are globalised” [271, L, UKM, N].

On the other hand, there are three comments which give no information on the level of exposure and knowledge on NEP among the academics but again can clearly indicate the academics’ inability and ignorance of how to implement the NEP:

“each academic should feel deeply the objective of NEP. The constraint is when some academics do not want to make NEP as their teaching objective (translated)” [162, T, UPSI, N];

“Less interaction and NEP appreciation (*with students*). Only do teaching and lack of value taking. The relationship of the academics-students is only in lecture hall” [202, L, UPSI, N];

“students (as well as lecturers) focus too much on academics and ignore activities that can foster other aspects (*such as NEP*)” – [235, L, UPSI, N];

One academic raised the point of what could happen to students (because of less serious in NEP implementation), as the future hope of the country and society:

“The idea of NEP is good and very relevant, but there is a lack in its implementation, which then has the effect on students nowadays, where many of them are low in morale - for example the way they dress, an absenteeism habit, laziness, and too much dependence in term of spoon feeding from the lecturer (translated)” [5, L, UKM, Sc].

In fact the understanding or implementation of NEP is a process which takes a long time. The implementation in HEI is of even more importance. One academic said,

“the implementation of NEP must start at the beginning of education and remain consistent throughout the years.the basic values must be imparted early and strengthen at the later stage.....” [42, L, UM, N].

This opinion stressed the feature of NEP that applies across all levels of education, and it should not stop only at school. In fact to some extent, the implementation through understanding of NEP in HEI is even more required here. After all, the implementation and understanding of NEP closely relates to the higher education policy.

Gender appears to impact on academics' perspective of this constraint about the lack of exposure to NEP. More female academics seem concerned about this issue where 15 (60%) out of 25 academics indicated this kind of constraint, and males made up the other 10 (40%).

5.6.3. Political and ideological influences inside or outside the universities involving policies, administration, etc

Among factors affecting the implementation of NEP in HEI, the third most common problem raised by the academics is political and ideological influences coming from inside or outside the universities. Political interference is seen by almost all who responded as not needed in higher education, especially those coming from the politicians or outsiders who have interests in certain aspects, as it can interrupt the smooth process of operating the universities within the professional capacity of all the academics. There are five statements indicating this in general:

“Political, ideological and intellectual constraints. Too much political and bureaucratic interference.”, [4, A, UKM, N];

“Throw away political attitude in HEI, throw away state and group spirit in HEI, (translated)”, [20, L, UNIMAS, N];

“.....Over involvement of political interferences” [34, P, UKM, Sc];

“Involvement from outside/political/government (translated)” [171, P, UKM, N]

“Very much dictated by political consideration, sometimes not based on research findings.....”, [269, A, UPSI, Sc]

In the other comments close to the above, eight academics mentioned how it can occur:

“Political influence and interruption together with prevention by using various extreme acts (translated)” [127, L, USM, Sc];

“..... The appointment of Vice Chancellor is also based on politics not on their professionalism” [87, A, UM, Sc];

“No freedom to talk to give alternative opinion (*mentioned four times*)” – [81, A, UKM, N], [87, A, UM, Sc], [88, L, UKM, N], [108, L, UKM, N];

“The education system is always changing. Emphasis more on side aspects under the influence of the country’s politics (translated)” [223, P, UKM, Sc];

“..... overnight ill-policies (*brought by political interferences*) have dampened the smooth implementation of the objectives of NEP into HEI”[34, P, UKM, Sc]

The occurrence of almost all aspects of the above has been confirmed by Rashid (2002) in discussing the politics of higher education in Malaysia today. Among the impacts of this that can be seen are those as described by one academic:

“..... Low personal, moral and intellectual integrity among a large group of academics. Many academics are not supposed to be in the academia. They should be in the government bureaucracy or in politics. Definitely some are quite confused about their actual roles” [4, A, UKM, N]

In considering this matter, three academics gave suggestions:

“..... My suggestion is please do not bring politics into the campus be it from PAS or UMNO (*both are major political parties*)” [87, A, UM, Sc]

“..... Let the academics be fully responsible in all matters related to education (translated)” [92, L, UMS, N].

“....Any policy implemented must not only be based on experience and observation (*refers to political dictation here*) but on sound scientific assessment and evaluation” [269, A, UPSI, Sc].

These statements are in line with the wide understanding that the university is solely an academic ground with many academics in it.

Political influence can also be specifically brought by any individual academics in the university itself who have some authority, or even those who have not. They seem to do this not for the sake of academics, but more for their own personal interest, for example to get more mileage and an advantage to be promoted and appointed to an important position, or to have a future career in politics but use the university as their stepping stone. According to Rashid (2002):

“A few academics in this country are very fond of becoming spokesmen for the ruling parties in the government, supporting certain policies and decisions bluntly. To some extent the comments, opinions, and views made by the professors or the university lecturers are very biased rather than academic or scholarly. Obviously, the unprofessional remarks made by the professors disappoint the public, who generally expect *(they should)* be more politically neutral”

There are some expressions from four other academics that give evidence of the existence of internal politics:

“..... When you are at the top, political spirit must be removed automatically, and you do not just like to find other people’s mistakes and give an opportunity for people to raise their voices and be transparent in governance (translated)” [20, L, UNIMAS, N];

“There are internal politics that it is hard to avoid (translated)” [56, L, UKM, N];.

“.....University politics is biased towards UMNO, the ruling Malay party within BN. Basics of NEP is widely misinterpreted depending on whose side one is in within the spectrum of racial politics in Malaysia” [88, L, UKM, N];

“..... office politics, unnecessary intervention from upper echelon.....” [249, T, UKM, Sc]

It is indeed interesting to note that nobody except one academic in this research says or implies that political influences from various parties are beneficial to the universities. There is only one academic, who hoped that politics would solve any financial, logistic and technical constraints in HEI:

“.....Yes, upgrade all of them (*financial, logistic and technical constraints*), and more political commitment/will and moral obligations on behalf of those in position of authority (decision makers) - avoid "hangat-hangat tahi ayam syndrome (*the too-short excitement syndrome*)" and sloganeering, more action, less politicking of academic/intellectual issues crucial to national wellbeing and development [155, A, UKM, Sc]

We can see here, however, that this academic still put some emphasis on the fact that political involvement could possibly create problems in terms of too much politicking in the process of giving help (which is not good either), or much talk but less action, and only slogans or short term intentions without promising real action. This academic still had a doubt as to whether the political involvement that the universities could depend on would be really a good solution in practice.

It can be seen from above that political issues attract male academics highly in terms of response.. This is proved when out of 19 academics who responded to this constraint, 16 (84.21%) are male.

5.6.4. Less effective in the university system

The academics also provide a number of perspectives on certain aspects of the current university system that seem less effective or need improvement, and also how this can occur. The reason why the NEP is not successfully implemented in HEI can therefore directly or indirectly be identified.

An academic in UKM feels that the promotion process in the university today is based more on research related activities and less on teaching.

“the university emphasis is more on the academics’ research and publication for promotion and there is less emphasis on teaching to increase student skill (translated)” [96, L, UKM, N];

However, another academic in UNIMAS thinks that research related activities are not given priority for promotion but the administrative activities are given priority instead.

“..... Promotion should be based on merit (research and publication) and not only on the administrative aspect (translated)” [107, L, UNIMAS, -];

UKM has been established much longer than UNIMAS. This means its system has to be more focused on research productivity. This is common in academic world because it involves extra initiatives and experiences. However, to include the situation of the

ignorance of teaching productivity in UKM, as well as putting most emphasis on administrative tasks in UNIMAS, both for promotion process, are not appropriate in the current HEI operation in Malaysia. It is therefore not good in general, especially when we consider the whole system that also involves the students, who are major clients of the universities. Treatment of teaching, research and administrative productivity should be balanced in the promotion process. After all, these are academic duties that involve the academics' daily time. But the promotion process itself can be very slow, as according to one academic:

“.....Some became less motivated because very slow promotion” [206, L, UPSI, N].

In terms of how the approach of teaching in HEI is not generally achieving the expected standard yet, there is a view of one academic on this:

“Teaching pedagogy approach in HEI is not implementing and translating NEP objectives (translated)” [102, A, UKM, N].

In another development, the core and practical elements of the system of HEI are criticized, as shown by the following six academics:

“The curriculum is fragmented, with too much emphasis on academic achievement (translated)” [173, L, UPSI, Sc];

“Too much emphasis on the examination system (translated)” [294, L, UPSI, N];

“..... The current system of an undergraduate honours degree of 3+ years including thesis for every undergraduate, wastes valuable time. If the older system of 3 years for a pass degree (for ordinary students) or 4 years with thesis

honours degree (for the bright/motivated students) was reimplemented, we would not waste so much time on the shoddy work of so many mediocre students, but could invest our efforts in developing the intellectual and research skills of the best students” [182, A, UMS, Sc];

“The university pays more attention to student affairs than the academics (translated)” [222, L, UPSI, Sc];

“low enforcement and no encouragement” [224, L, UM, Sc];

“ I think we do not have our own framework of evaluating performance ex. publication in Malay viewed as lower (national) vs publication in English (even though the quality is lower); we need also to stop the quantification/positivist/scientism culture that is infiltrating the academic culture- to the extent that space for creative indulgence (which is actually the academic core) is left out. The onset of global institutional standards like ISO is even further damaging the academic culture by placing numerical value on the intellectual exercise. I think this is absurd in equating academic endeavor with the factory productivity methods” [271, L, UKM, N].

There are also some suggestions for further implementation that seem to be in line with the objective of the NEP, as given by four academics:

“The age of below 40 as one of the conditions for the academics to further study at Master or PhD level should be revised as it limits the opportunity.....”lifelong learning”.....after all the academics are the core group in disseminating knowledge to the country's young generation” [22, L, USM, N];

“ Teaching loads for academics (max 12 hrs per week) currently refers only to class time. I feel it should also include time spent on thesis students”

[182, A, UMS, Sc];

“There is a need to introduce certain points for student attitude in any course conducted in the university (translated)” [194, L, UPSI, N];

“In doing research, no standard guidelines or criteria that specifically evaluate student performance (*on this*). This should be introduced (translated)” [233, T, USM, Sc].

Concerning another aspect, gender seems not to bring much impact on academics’ perspective of how much less effective the current university system is when it comes to coping with the demand of fully achieving the NEP implementation in HEI. Data shows that the two genders are divided almost equally – 48% male and 52% female respectively (of 23 responses on this). This pattern of response by gender is identical to that among the 297 responses.

5.6.5. Bureaucratic constraints

The aspects of bureaucratic problems in HEI and the degree of the problem is another issue which is touched on significantly by the academics. In mentioning the existence of the problem, there are various ways of stating it, as viewed by the following fourteen academics:

“The structure, content and offering of courses are very rigid, there is not much flexibility for academics to make continuous changes or introduce new ideas into them. Any changes usually have to get approval from School Board and university.....” [43, P, USM, Sc]

“..... Too much bureaucracy to adhere to so much so that the important things such as students' development, and lecturer-student interaction becomes affected” [54, L, UNIMAS, N]

“Lack of support from top management” [78, L, UKM, N]

“lack clear policy directions and certainly lack concerted efforts to obtain all stakeholders' input before making policy decisions at the HEI as well as Ministry concerned” [104, A, UM, N]

“The voices of academics who are directly involved with students lacks attention from top management. Policies are usually given from top to bottom (translated)” [149, L, UNIMAS, Sc]

“Bureaucracy should be reduced in the process of getting any support for teaching and research by the academics (translated)” [157, A, UMS, N]

“The problem of "top-down" management. It is suggested that the management always pay attention to the opinion of the academics, who are the non management staff (translated)” [218, P, UKM, Sc]

“Courses have been decided by the Department of Higher Education, but the time is limited (translated)” [232, S, UPSI, N].

“red tape, and lack of basic information about what they are trying to do and arrogance of certain parties” [249, T, UKM, Sc].

“There is too much red tape in local HEI (especially the public HEI). As such new courses or initiatives could not be carried out as fast or as easily as we want it to be. I would suggest decentralization of executive power so that universities are given a free rein to run things as they see fit in the spirit of NEP” [255, S, UKM, Sc]

“not independently minded. Always waiting for instructions from higher ups in KL” [272, P, USM, N]

“(No) clear direction from top leader” [281, S, UPSI, Sc]

“Policies are changed frequently. Academics probably wouldn't have time to implement properly” [293, T, UKM, Sc]

“a lot of bureaucracy (translated)” [295, T, UPSI, N]

In summarizing these academics' views, three ways of how it can occur are therefore identified. First is as the situation faced by the 43rd and 255th academics, where their intention to make any change to the status-quo would be almost impossible, unless they can manage to convince the top management or higher authority. Secondly, as the 54th, 157th and 295th academics felt, they could become less productive and lack chances to fully conduct their academic responsibilities, as much time has to be first devoted to handling bureaucratic situations. Lastly, as the academics numbered 78, 104, 149, 218, 232, 249, 272, 281 and 293 felt, is when the top management seems to keep their distance from the academics in any related matter .

In another development, the issue of bureaucracy is slightly more relevant to male than to female academics in this research. From 15 academics who highlighted this constraint, 9 (60%) are male, and 6 (40%) are female academics.

5.6.6. The universities' orientation is less focused on providing more holistic and integrated learning experiences, including building up the students' critical thinking

From another set of perspectives, the universities seem not to focus on providing more holistic and integrated learning experiences and building up the students' critical thinking. This concept is importance for the benefit of Malaysian society in future, as according to an academic,

“A holistic education is important. Students should realise that good grades are not everything. Moral values, integrity, and respect for others-- young and old-- need to be fostered. Individualism is on the rise! A majority of kids these days seem to be go-getters -- at the expense of everything and everyone else. But of course there are still those few who seem to be the saviours” [207, A, UKM, N].

This suggestion draws attention to the importance of the holistic and integrated learning process in higher education. Two other academics make this point more explicitly:

“HEI should not only provide knowledge, but focus more on educating students. HEI should also implement the concept of "critical thinking" in all aspects. Student activities so far just focus more on getting knowledge without thinking

about what happens outside and critically considering it (translated)” [1, A, UKM, Sc];

“The academics should put extra effort into educating students and not just teaching blindly (translated)” [112, L, UNIMAS, N];

In giving examples of why the holistic and integrated learning processes in higher education are not being realized, according to five academics:

“HEI concerns mainly on the education and physical development of students. It seems that spiritual and moral aspects are individual concern, and there is a belief that up to students to conduct and decide their life since they are grown up. Nothing much has been done to prevent and cure moral failure among students” [25, L, UKM, Sc];

“The university would not be able to implement the NEP fully because student achievement in university is measured by looking only at their academic achievements, and the academics’ achievement on the other hand is evaluated through the Academic Teaching Assessment form, which contains only teaching information in it.the students also are not exposed to NEP (translated)” [125, L, UPSI, N]

“Most of the academics only focusing on academic achievement” [210, L, UPSI, Sc];

“..... The academics place more stress on the content aspect in their disciplines of subjects..... The aspect of spiritual, emotional and physical are compulsory for the students to take at the same time (*through other courses*), but there is no strong integration in the relationship between these twoThe reason for this

(the non holistic learning experience) happening is that these two approaches have been taught separately. (translated)” [232, S, UPSI, N];

“The best move for Malaysian academics to achieve NEP is through detail understanding on the meaning of the concept of knowledge itself. However, during the time where Master and PhD studies are conducted (*as an example of a segment in HEI*), elements mentioned in NEP (*including the holistic part*) actually have not been found at all” [288, L, UKM, N];

There are two practical suggestions from the respondents as to what the students and the academics should do in order to make the learning process more holistic in HEI:

“I feel that undergraduates should take courses from various faculties so they know a little bit of everything rather than (as it is now) jump straight into their particular majors and they don't get the opportunity to mix with students from other faculties. If students take say 18 credits from humanities, 18 credits from science, 18 credits from physical education etc, and a major portion say 40 credits from their major -- wouldn't that make their experience at HEI more holistic, integrated both intellectually and whatever else. And if they want to sharpen their skills in a particular area, the masters' course would be the next logical step” [129, L, UM, N];

“Well understanding (*the whole concept of knowledge*) and having proper preparation for conveying knowledge to the future generation in line with NEP requirements. (translated)” [264, L, UPSI, N]

The matter of how much less focused the universities' orientation is in providing a more holistic and integrated knowledge development process seems more attached to the male

academics. Out of 11 academics who raised this constraint, 7 (63.64%) are male and 4 (36.36%) are female academics.

5.6.7a. Financial, logistical, resource and technical constraints

In considering together a number of perspectives concerning the occurrence of financial, logistical, resource or technical constraints in the universities, the degree of deficiencies of these can more or less be imagined. Eight academics suggested what are they and how they could happen:

“Lack of good teaching and research facilities, as well as lack of quality human resources” [12, P, UNIMAS, N];

“.....The infrastructure and source of new information (such books and journal) are still fairly lacking. more financial resources should be devoted to education if this country is to excel in education” [43, P, USM, Sc];

“Not enough budget for development. No money to buy scientific instrument. Should allocate more money for research and development” [74, P, UKM, Sc];

“Lack of resources in terms of physical and allocation (translated)” [95, L, UMS, N];

“Budget constraint that prevent the university to develop a more comprehensive program for the students” [152, S, USM, Sc];

“Lack of facilities (translated)” [183, L, UMS, N];

“Lack of resources such as journals, ICT facilities, budgets for conducting research (translated)” [188, S, UMS, N];

“..... I am the only Professor in a school here a problem in UMS is, the academics are not provided with computers. I have been here for six to seven years and I am also a program coordinator but I have not been given a computer to make the daily work become smooth(translated)” [296, L, UMS, -];

In summarising the above responses, we can say that even though some academics could refer each of the problems specifically to their own institutions, and other academics referred to a wider scale, in general these are all common failings which can be seen in Malaysia's HEIs. The commonly lacking problems here are therefore in terms of financial, facilities and resources to support the conduct of academic roles.

The factor of gender does not seem to have any impact on academics' perspective of constraints in the aspect of financial, logistical, resource and technical factors. Data shows that the genders are exactly divided equally – 50% male and 50% female respectively (of 10 academics responded to this).

5.6.7b. Constraints in implementing and integrating religious elements

The emphasis on religion as an obligation in many aspects, particularly in the universities, is not a rare phenomenon, and it started to occur as early as before the fourteenth century; examples are in Paris, Oxford and Cambridge universities (Dunbabin, 1999). Implementing and integrating religious elements in the university

system in Malaysia is actually not an easy task, even though this is stated in and required by the country's NEP and even the national policy as a whole. In referring to the NEP, specifically on this element, it seems that it can be interpreted in different ways, as according to two academics:

“..... When we explain something to the students especially about latest technology, we are overwhelmed about the technology but not about who gave/create that technology. Lecturers/tutors/teachers and me, never ever mention about how God the almighty created all the technology that humans discovered all this while. There's no connection mentioned in classes about the relation between technology and God the almighty. if someone has strong belief in God then that person will be strong in all aspects and the best thing is the whole world will be in his/her grasp” [19, T, UPSI, Sc];

“..... (*The demand of NEP*) must begin with a belief in God because this value will encourage the educators to educate their students with moral values based on the belief in and devotion to God (translated)” [234, L, UKM, N].

The problems of implementing this rely on a few factors; one of them is on the academics themselves, and relates to the education background they have:

“.....the educator has been educated in a system that contradicts the NEP by referring to other systems in the world that ignore the God aspector secular systems How can one practice NEP if the educators themselves have got knowledge which contradicts with NEP at the beginning? This is the problemmetaphysicallyeducators/researchers in Malaysia do not know what is the meaning of knowledge (translated)” [288, L, UKM, N]

The other problems of implementing this rely on technical factors; examples have been given by some academics:

“..... lots of works, but the listed works have not contained any specific tasks to build devotion to God. The total number of syllabuses that need to be completed also provides less opportunities for the academics to include the element of devotion to God during lecture time (translated)” [151, L, UKM, Sc];

“It is difficult to measure the attainments of the students attainments in terms of spiritual and emotional..” [243, L, UPSI, N];

“lack of spiritual programmes that can guide the students not only to become excellent students, but also to have dignified attitudes (translated)” [199, T, UPSI, N].

The last problem of implementing this will of course rely on the fact that some people in Malaysia have their own very firm stand on belief or faith. Even though they could understand the concept of NEP that is integrating this element, they would not be keen to accept this approach of revealing and conveying knowledge in higher education in particular. According to one academic:

“There are non-muslim students and their parents prefer to exclude God matters from their learning at HEI” [297, L, USM, Sc].

In further discussing this constraint involving religious elements, more male academics responded to this issue, - 70% (7 out of 10 academics who responded in regard to this particular category). In the next six sections discussing the other constraints that affect

the flow of NEP implementation in HEI from academics' perspective, the gender factor will not be checked any more, as less than ten academics responded in each of the categories.

5.6.9. The majority of students aim only for paper qualifications but ignore the real knowledge culture and ethics

The production of students who aim only for paper qualifications while in the university, but ignore the real knowledge culture and ethics is a worrying situation. According to one academic:

“..... The majority of students study and aim to get a degree, so that the way they learn is to pass the examination, and then this is going to be used to secure a job or a good salary. No knowledge culture can be seen here. They are excellent and diligent students(*but*) morally, they have set their minds to just think about themselves(translated)” [15, L, UKM, N]

For an academic, there is a danger if this culture continues, as the students will just do anything to pass the examination, since this is solely uppermost in their minds - the aspects of morality and ethics can be to some extent put aside:

“Mostly, our students' focuses are on their result instead of knowledge that they have to gain. Therefore they tend to cheat during the exam, hired somebody to do their assignment and so on. As a result, they will get their degree but in term of knowledge, spiritual, moral, responsibility etc are quite low. I think we should

change parents and students paradigm from the primary towards the ethics value instead of a piece of degree paper/national certificate” [200, L, UPSI, Sc]

The impact of an orientation solely towards gaining a degree is negative, in that students have an attitude of feeling safe in a comfort zone, lacking initiative and being less creative. According to two academics:

“The students have an attitude of having less interest in taking any initiative to improve themselves, and just wait for the materials from the lecturers alone (translated)” [14, L, UNIMAS, N].

“..... Much of the problem (*of NEP implementation*) lies in the 'spoon-feeding' techniques the students are accustomed to at the school level where training in examination taking skills is the main emphasis of education” [273, A, UM, N].

Those views in this section indicate that there are some opinions within the HEI in Malaysia about the existence of quite a number of students who bring the way of getting knowledge in school and lack initiatives of changing this attitude when they are in the university, where the system of teaching and learning is very different in general. The university authorities can play an important role in identifying them to give guidance wherever possible for this situation does not continue to happen, if not get worse.

5.6.10. Works are career achievement and not knowledge development oriented for most academics

There are some opinions which try to show the reality that, for most academics, their works are career achievement oriented, not knowledge development oriented in wider aspects, as keenly required in the academic sector. In quoting two of the academics views on this:

“..... work is based on the intention to get promotion and not for the knowledge process anymorebecause the present structure is geared more towards that (translated)” [108, L, UKM, N];

“.....Most of the academics just aim for higher positions and do not shape the students’ or even their personalities. Even though they give lectures, they only concentrate on content and examination. This is regrettable. It is hard to evaluate one’s intention in serving the university. This is very unfortunate in the sector of education, where the process of human development is carried on(translated)” [15, L, UKM, N].

The above two opinions indicate how this situation has already become a culture among the academics in the present day. These two views are not always correct, but at least they provide one aspect in the HEI system that could be evaluated on whether it happens in the current operation in HEI

To take another view, but one that is related, one academic placed the blame for this kind of culture not only on the academics, but also on the students (whose inclinations

were discussed in the previous section in this chapter, in looking at what they usually want in HEI):

“the constraint may lie in the academics' and students' attitudes, goals and objectives in their pursuits of anything - be it a safe and steady income or a piece of diploma, respectively” [73, L, UKM, N].

5.6.11. Some courses are being taught not by the right academics as they have a different expertise

Another practice that can hinder the development of any specific body of knowledge is when some courses are not taught by the right academics. The reasons for this too may vary, but the most common one is the insufficiency of academic staff in the faculty. A statement of one academic in highlighting this issue is evidence that this happens in HEI, and is also a threat to fully implementing NEP:

“..... Besides that, the conduct of teaching a subject which is not within the academic's field of expertise also becomes a constraint for the process of delivering knowledge effectively (translated)” [14, L, UNIMAS, N]

In supporting this argument, another two academics express and emphasise other things, but indirectly have also mentioned academics who should not in the first place teach the particular subjects assigned to them, because they do not really know them:

“..... Many academics do not have a professional qualification to teach (*the particular subjects*) (translated)” [9, A, UKM, N]

“.....focus has also to be given to preparing teaching materials, especially in teaching subjects which are not in our field(translated)” [219, L, UNIMAS, Sc]

5.6.12a. Poor standard of English language amongst students and even amongst some academics

Among the other problems that restrain the full implementation of NEP in HEI , the poor standard of the English language amongst students and even amongst some academics is one of them. According to two academics in reference to this:

“The lack of English skills is a major problem for students not only when in HEI but also in the job market. Generally, communication is a problem for all students. They lack the language skills, thus the confidence to speak their mind, and intellectual strength to argue their points.” [273, A, UM, N];

“I think one problem in implementing the NEP and HEI is the poor standard of the English language amongst students and even amongst some staff. More subjects should be taught in English” [274, T, USM, S]

It is implied here that the academics feel that the problem of English language ability has a large impact, particularly within the academic world, and in the case of the students who are going to occupy the job market. In this research, just two of the academics in the sample highlighted this constraint. However, as the people at all level, from the layman to the individual in the government seem are always stress this issue

continuously in coping with the current challenges in a competitive world, this issue is thought as important to be raised up and therefore stand on its own category in this chapter.

5.6.12b. Poor quality of students who enter universities, where they were not developed enough in schools

There were two academics who felt that the successful implementation of NEP in HEI could be far from realistic owing to poor quality students who enter universities, where they were not developed enough in schools. Even though the situation of letting poor quality students go to university is not supposed to happen if based on the high entrance merit, it does exist in the current scenario, and there are some opinions on this relating to NEP implementation:

“The quality of students who are admitted into HEI is getting low compared to past years. And we can say that there are some who are even "not qualified" to enter the university, by looking at their weak level of mental grasp on theory and concept, and weakness in critical thinking. This situation more or less makes the academics "give up" on these students (translated)” [107, L, UNIMAS, -];

“..... the academic quality of the students is generally decreasing.University students are also becoming less polite and do not respect lecturers compared with students in the past. They also do not know that the philosophy of entering university is to gain knowledge, not to be spoon-fed knowledge. Many are not

serious in university. Almost all of them do not have critical minds (translated)" [140, A, USM, Sc].

The latter also stressed the bad attitude of the students as another low quality aspect that should be considered, besides the poor quality in academic ways, which was always mentioned among the whole student body in the university. These two particular situations are not the preference of most people, especially those who are directly involved in the operation of higher education. But as time passes, and in line with the country's development process, everyone has to face the reality that this kind of thing could get worse⁴⁶ in a formal system. At this point, the challenge is how to react to this situation in whatever ways are possible for the respective students (i.e. to give more proper attention).

5.6.12c. The academics do not have a good relationship with practitioners elsewhere outside the universities

In making sure that the students are widely exposed to the career world related to their field, so that they can have a clear mindset about the real means for them to apply their knowledge practically, the academics should first establish a good relationship with practitioners elsewhere outside the universities. Following this move, the academics

⁴⁶ This is an example of common things happen around us and most people aware about them. "In fact, people in all cultures and throughout history have thought that things are getting worse everywhere, particularly in any formal system" (Tymms, 2005).

could make the knowledge that they are going to deliver in the lecture hall become more up-to-date, hands on oriented, practical in approach, and also more relevant in content. These features and characteristics are among those integrated in the NEP in the process of producing competent graduates in the job market for the developing nation. The problem of the academics is that they have a very loose relationship with the practitioners outside, as stated by one academic:

“The problem is the academic staff doesn't join the practitioner or don't have a good relationship with the practitioner at all suggestion” [51, T, UKM, N]

Another academic gave an opinion as a way of confirming this situation, by saying that:

“NEP is not supported by the private sectors. Communication problems faced by the graduates are bigger than the knowledge they have in their own field of study (translated)” [82, A, USM, Sc].

This comment indicates that because the academics take for granted the good connections and relationships they should have with the outside practitioners, the implication that the practitioners would not support the NEP is likely to arise. When no link exists between these two sectors – the manpower providers and takers respectively - the process of implementation of NEP in HEI can be wasted.

5.7. Summary of the findings of this chapter

In brief, this chapter shows how the analysis of data which is mainly qualitative is conducted. In general, the chapter is all about the constraints that have happened or

could happen in the in process of implementing the NEP practically in HEI in Malaysia. The constraints have been identified in an exploration study approach. They were classified into fourteen different categories for their own common ground. Even though there is imbalance in the number of responses to the different categories, in terms of some categories were mentioned many times, whereas some only a few, this is not the basis on how the categories have been formed. Instead, the importance of each constraint, as represented by the respective categories, become the basis of the categories formation in the eye of the researcher by using his academic judgment.

CHAPTER 6

Conclusions and Discussion of Findings, and Recommendations for Further Research

6.1. Introduction

In looking at pieces of research into higher education that have been conducted in Malaysia, while there are quite a number of studies which involve and are about students, research is rarely about academics. Only a little work has been done in looking at productivity of academics, and research which sought to discover the level of productivity of academics, and the factors affecting it in teaching and administration, has been even more rare in Malaysia. This means that almost all research conducted on academics' productivity so far has just focused on research and publication, as this can be easily identified.

In this study, Malaysian academics have been heavily involved. Their perspectives were used in almost the whole process of data collection. The academics' response to any part of this research can actually be relied on and considered valid, based on successful research done by Ngah (2001), which considered the academics' perspectives on their own productivity. Response rates for self-administered questionnaires on her study were very impressive, with 76.8% and 66.4% response from science faculties and engineering faculties respectively. In general, the academics' perspectives on this study are all about the academics (themselves and their peers), except to some degree in a section of the questionnaire where they were also evaluating the students. The evaluation on students occurs in the last section of the questionnaire about the implementation level of National Education Philosophy (NEP) in Higher Education Institutions (HEI) in Malaysia.

There are at least two unique features of this study that contribute to the related body of knowledge. The first concerns the findings about the level and constraints of NEP implementation in HEI. This is the first study to look at particular elements of NEP and relate them to the current system of higher education in Malaysia. Even though the academic world in Malaysia is generally aware of the existence of NEP as a basis with which to operate all of the education policies practically, it is commonly understood as suitable only for use in schools (even though some of them might possibly say otherwise). This is proved when any discussion or debate on the successful implementation of NEP only refers to the context of schools. Furthermore, it is only school children who are usually the focus of what the education department should do.

The NEP is in fact the national philosophy that covers all levels and types of education in the country. It is important to deal with the epistemology aspect behind the formation of NEP in any discussion and plan to improve higher education. After all, higher education is the last area where people are surrounded by the formal education system in any country, including Malaysia. This study seems to have been conducted just in time, for the formation of the new Ministry of Higher Education means that there is a need for several pieces of research that can be used to boost the effectiveness of the higher education system. In pioneering this study, the outcome could then be extended for other opportunities of conducting further studies in this area in the future.

The second unique feature is that, for the first time, this study was conducted mainly by using the online survey procedure (web-tools and e-mail) involving the majority of academics in a single country – Malaysia. The online survey is commonly conducted in

marketing and business research, where the sample is open to prospective clients, customers, and informants, but not in other areas. However, it is increasingly used in educational research, even though it is not commonly conducted with university academics who have the privilege of internet access. There are a few possible constraints in conducting the procedure of online surveys, for example in terms of getting a high response rate and valid data. Even though these problems have been handled to the very best of the researcher's ability, they have in fact not totally been solved, and there is still plenty of room for improvement. For example, the response rate of the survey, at 42.43%, is still considered low. However, even though it is low, the researcher still struggled to get it. It took up to 71 days to achieve only a total of 297 responses, which is considered a long time for this kind of educational research, which used a simple questionnaire, and included well educated individuals as in the sample.

In order for future research that is going to use the same procedure to become more effective in collecting data, future researchers will first have to overcome a few obstacles before conducting the survey. For example, they might consider using the convenience sampling procedure to get quick responses, and this might overcome problems such as prospective respondents not receiving emails, or purposely delaying their responses; this is a particular problem towards the end of the research. By using this method, the response rate might also be increased, perhaps even dramatically. However, to get this done, an issue of validation would arise. People could argue that the sample does not represent the population at large.

6.2. Conclusions and discussion of data findings

Some common patterns are shown in data findings that have confirmed the previous research results related to higher education. There are also new findings in this research, which complement what has been done before, to make the body of knowledge concerning higher education in Malaysia today more informative. This section will be divided into two. First is the conclusion and discussion mainly concerning the results in regard to the productivity of academic roles. The second is specifically about the NEP implementation in HEI in Malaysia. At some stage within this section, the qualitative responses will be linked to the quantitative responses. Both of these two will be touched upon throughout the following sub-sections.

6.2.1. Research results in regard to the productivity of academic roles

In the analysis of the findings, on average, the academics feel that their teaching is the most productive of their academic roles. Self ratings of teaching productivity are significantly higher when compared with both research and administration productivity, and research and administration productivity do not have significant differences between them. It is also shown that teaching productivity (self-rated by the academics) in most conditions has not been affected by any factors other than gender and the field of expertise (whether they are in science or non-science related disciplines).

Teaching is something that deals with initiative and creativity, and by having basic higher education knowledge, every academic is able to explore and put in extra effort in order to make their teaching very productive. An academic should have at least basic tertiary knowledge in the subject that they are assigned to teach; some have studied in depth in that field and some in a related field. Therefore to be able to be good at teaching the academics need to develop their own initiative. However, it is not clear why the thoughts (self rated) concerning teaching productivity are significantly higher among female and non-science related discipline academics compared with male and science related discipline academics.

On the other hand, the thoughts concerning research productivity seem to be easily and significantly affected by several factors that exist within the academics' daily routines. The only factors that do not affect the view of research productivity are the disciplines of expertise, whether their expertise relates to the highest degree or not, and the term of academics' posts. Research roles can be related, and are associated by everybody as carrying the highest weighting in the promotion assessment process. Because every academic perceives research activity as important, they try to do this as far as possible, but various factors do affect this initiative. These factors could be associated with their availability, capability, opportunity, academically conducive environment, family motivation, experience, knowledge and training received.

Administrative productivity can be seen as having no specific pattern, from the data findings. This role depends on skills and experience, and on how supportive the other people are, that are working together with the academics. However, the academics who

have the highest qualifications from overseas, those who feel their discipline always provides many opportunities for career development, those who hold permanent posts, the professors, and those who have a doctorate degree, are the groups that seem to always have an advantage, and they can become excellent in conducting administrative tasks, to the eye of the academics.

In the context of discussing the productivity of the professors in Malaysian public universities, only about 59% of them are thought by the academics as deserving to be professors in relation to their productivity. This is the scenario in the country of Malaysia, and it may vary in different contexts in other countries. There may even be a difference if the professors were to be evaluated by the students, by the management or education authority, or by using their own criteria. At this stage, the quantitative data found in explaining this percentage match with the evidence of qualitative data given by academics. One academic, who was the 107th respondent and a lecturer from UNIMAS,⁴⁷ said in a given comment:

“.....You should evaluate the existence of the current professors, especially (*who sit*) at the highest level. When the appointment of a professor is done by using a set of suppose-not-to-be criteria, this situation become factor that can negatively effect the motivation of other academics (*especially*) who seriously involve in research and publication. This situation indirectly will disable the NEP when its objective could not be fully achieved (translated)”

⁴⁷ UNIMAS stands for University Malaysia Sarawak

There are two sets of relationships that have been looked at. In the first set of relationships between implementation success of NEP and academics' productivity, both data categories for NEP implementation by using either self-rated or reported measure have a significant relationship when compared with any indicator of administrative productivity, but the correlation value is fairly low. Except for one other significant relationship between the reported measure of NEP implementation and the reported measure for teaching productivity (this correlation value is low too), none of the other relationships are found to be significant in relating to teaching and research productivity. Therefore, NEP implementation seems to not have any significant effect on research productivity in any way. However, the magnitude of the relationships between any variable of NEP implementation and any academic productivity are all fairly low. Therefore, any effort to improve the implementation cannot be taken as something that can simply improve academic productivity. Other significant factors, as recognised above, that involve personal or environment traits, should be considered to a greater extent.

In the second set or type of relationships, which is between the perspective on professorial appointment based on their productivity and the success of NEP implementation in HEI, the significant relationship between these two happened in any of the four ways. It can occur between 1) the first variable on the perspective of professorial appointment (professors in the faculty), and variable of self rated on the perspective of NEP implementation; 2) the first variable on the perspective of professorial appointment (professors in the faculty), and variable of outcome measure on the perspective of NEP implementation; 3) the second variable on the perspective of

professorial appointment (professors in the university), and variable of self rated on the perspective of NEP implementation; and 4) the second variable on the perspective of professorial appointment (professors in the university), and variable of outcome measure on the perspective of NEP implementation. In conclusion, when the academics think that the process of professorial appointment is proper in producing a group of professors who deserve their position, they will feel that the NEP implementation will also be successful. This means in this context that people (particularly the Malaysian academics) who are positive about one thing will tend to be positive about another. This is because in this context, when the academics feel that there are a high percentage of the 'real' professors around, it will make the implementation of NEP become easier. The professors are then not only highly influential and powerful people (as their rank denotes), but they also function reliably.

6.2.2. Research results in regard to the NEP implementation in HEI in Malaysia

The quantitative data gives evidence that the level of knowledge of the academics on NEP in general is not bad, with more than half of the respondents having a fair knowledge or above, in general. Furthermore, each of the elements inside the NEP is also assessed as fair and above in the degree of implementation. In brief, nobody in general has a bad understanding of NEP, and also nobody in general thinks that any element inside the NEP or the whole NEP itself is badly implemented. While this understanding of NEP and the agreement on the level of NEP implementation in HEI, there are also some particular issues that need to be stressed or added to, in order to

make sure that the whole process of implementing the NEP succeed. The qualitative data gained from one open ended question in the questionnaire is meant to provide further and additional information for this purpose, by taking the academics' comments concerning any constraint on NEP implementation, with any room for improvement available. It is expressed as a way of finding out any possible problems or constraints that can happen in the process of implementing the NEP. The problems vary in the degree of seriousness from small to large, but it is expressed in the objective in order to gain extra input that can improve NEP implementation.

The open ended question provided in the questionnaire for this purpose is designed for the academics to specify and then explain freely concerning any factor and occasion that can create constraints and problems in any possible way for the NEP to be implemented in HEI. Among those who responded to this issue, some gave a long explanation, some only one or two lines of short explanation, and some gave a rather vague, unfocused and too subjective or loose argument. These last type of thoughts, after having a thorough evaluation, have been omitted from the rest of the data analysis, in order to maintain the whole validity of this research. All of the responses have been differentiated based on their common grounds or themes. At the end there are fourteen categories which have been identified in referring to the number of common grounds found. Then these responses were assigned into the respective categories in groups.

Generally, from these findings of problems of NEP implementation in HEI, the researcher drew a series of conclusions in terms of what the academics in Malaysia feel about:

1. The existence of a too-burdened public HEI system in Malaysia, with a significant amount of time that the academics need to spend only in teaching or administrative work. The academics' involvement in all academic roles is not divided proportionally as they feel it should be. In particular, they do not have enough time for research at present under HEI. The common reason for this burden is because of the lack of academic staff to cope with the increasing number of students. However, as most of the academics who mentioned the teaching and administrative burdens are lower in academic ranks, it suggests that the upper academic ranks – the associate professors and definitely the professors - most likely do not have any such problem in carrying out their roles, particularly in research. While this situation concerning the senior academics most probably may be true, at the same time perhaps they were also more reluctant to be critical.
2. The academics have become one of the groups in the Malaysian education system who generally are not exposed to the NEP, even though this philosophy should cover and involve everybody in any level of education. Therefore, even though some academics - especially those who used to be teachers - do know about the NEP, the majority do not. This finding supports what Hussin (2004) has said earlier, that it is not specified officially anywhere for NEP to be systematically and strictly followed in HEI, instead it depends on the institution individual policy orientation. This should probably be the reason why the NEP is not well understood there. Indicatively, some of the academics have never even

heard of it before. This perspective (the non exposure to NEP) does contradict what has been written earlier about the significant proportion who said that they were familiar with NEP. To explain this, those who feel that they know the NEP well are the ones in the sample who responded to the survey questionnaire. At the same time as they think that they are aware of NEP, they think that many other academics in general are not. In brief, Malaysian academics seem to know NEP well, but in their opinion, many academics in HEI actually are not familiar with it.

3. Internal and external political influences in daily operation in HEI could not be avoided and they can happen at any time and anywhere. None of the responded academics deny this statement; in fact they give evidence to support it.
4. It is less effective in some parts of the university system, especially in aspects of the promotion process, teaching and learning orientation, degree structure, treatment and assessment and evaluation.
5. Bureaucracy in HEI provides limited room for changes towards improving the situation, with less scope for any revision, from the type and structure of the courses offered, up to the whole system in HEI. The problems relate to the rigid treatment by the top management and the education authority, which has also indirectly taken away the academics' valuable time in some ways, and the expectation of being close to the decision makers.
6. The holistic approach in the process of conveying and expanding knowledge that involves mainly the academics and the students should be

conducted by replacing the current system that puts such a rigid focus on the students just getting a good degree. The current system ignores the aspects of critical thinking development, upgrading moral, spiritual, and physical, being versatile in the global environment, and other elements especially as required in NEP. The aspects of critical thinking and being versatile are among those which in line with what Bardaie (2003) has stressed earlier in meeting the international standard of global human resources development. Both the academics and the students should work together on how to achieve this target without delay. In any event, the students are provided for, and the academics are well prepared, with the concept of holistic and integrated learning process in HEI.

7. It is the existence of significant financial, logistic, resource and technical constraints that slow down what is supposed to be the fast growth of HEI.
8. There is still plenty more room for the implementation and integration of religious elements in the HEI systems, as required in NEP, to produce individuals with positive values alongside the process of knowledge absorption.
9. Students work blindly towards a paper qualification by hook or by crook, and the factors of knowledge culture and ethics are usually left behind.
10. Some academics focus more on career prospects rather than knowledge development in the current trend in HEI. This phenomenon creates a group of opportunists who are always getting or thinking bigger.

11. The practice of letting some courses be taught by academics with a different expertise is not liked by the academics, as it can impede the smooth flow of knowledge development in HEI.
12. There is a significant problem concerning the standard of English language amongst the students and also the academics.
13. The universities should always be alert to deal with the situation where some students are not competent enough to cope with the education system of higher education.
14. The academics need to build up and then maintain good rapport with outside practitioners in the real job market, in order to make their teaching conduct more realistic, practical, updated, and aimed towards the market and public needs.

The fourteen points listed above are arranged in accordance with the number of times each of them was mentioned, in descending order, where the ones listed earlier were mentioned more. In discussing all of the above conclusions, a few other related points and literature will then be included. First, there is a burden on academics that is a very common problem, which seems to happen nowadays in Malaysia. Even though this situation is subjective and not all academics actually experience it, it has been highlighted frequently, so serious attention has to be given to it. The way to trace the causes of this issue is by considering the other related factors involved, and the starting point is the focus of the government on expanding the opportunities for higher education for the people of the fast developing Malaysia – so the numbers of each student intake are increasing, and more higher learning institutions have been set up. Thus a significant

additional number of academics should now be employed to cater for the vast demand. These are the most important challenges for any higher learning institutions in the world to excel in future following what Taylor P.G. (1999) has suggested earlier. This move is however not easy, and could not be realised in a short time, as it would involve the public's budget allocation, and the current situation of economic downturn would make the situation even more disadvantageous. As a result, the burdens could possibly continue for a few more years. A short term plan in order to make sure that the academics do not become less motivated because of this scenario (which could then affect their quality and productivity) would be to recognise their burdens, and appropriate salary increment and promotion could then seriously be considered for those who deserve it.

Secondly, one should consider the context of a country that has its own NEP in explaining how a person should become after completing the education process. The objectives of the NEP in producing that kind of person are stated in general, meaning that they are not specific for any level or stage of education in the current education system in Malaysia. However, the findings of this research provide evidence that the NEP has mainly been stressed in schools, from upper secondary and below. The way it has been stressed is through sufficient exposure to teachers during their training (teachers' training) concerning the concept of it and how can it be implemented, with everybody in schools using it during the process of conducting their daily routines. It has been stated everywhere - in the school prospectus, on the notice board, and up on the wall. However, this seems to not happen in HEI, even though it does apply there too. Both the academics and the management personnel could not relate their daily activities

in the universities to NEP practically, as it seemed to them to be a sort of irrelevance, with the students being even more ignorant. The situation, if it is true, where many academics (especially when the majority of them are not used to being teachers) are not aware, thinking about, or have even never heard of the NEP, could become very unfortunate. The Malaysian education authorities should take this information seriously, at least to make everybody in HEI aware of the NEP, so that the process of teaching, learning, researching, and administering in universities would have a focus. In addition, from time to time, the process of educational development in HEI will become full of energy or action as all of the higher education implementers and participants have something concrete and common to everybody to be based on.

Thirdly, the existence of political involvement in any aspect of HEI can be seen as having pro and cons, but the academics see this interruption as bringing more disadvantages in the current context. In the current political environment in Malaysia, the National Front party are as full of power as a government (they have been standing for the government for a long time, and are very powerful and have influence everywhere). Therefore higher education tends to be much influenced by the government, even if the majority of academics do not agree. This is understood to be unavoidable, and acceptable at least for the time being. After all, political factors to some extent cannot be avoided and exist in the operation of any organisation, particularly in relation to the educational world in the globalisation era (Ahmad, 2002). Furthermore, in relation to what Scott (2000) and Rochford (2003) have mentioned earlier, to protect any knowledge institutions from any discrepancies, the idea that such influences give certain benefits to the universities can also be true. Some influences are

actually needed in the context of higher education in Malaysia, in order to solve any disputes or problems that could happen in the universities that would affect work productivity. Those kind of disputes or problems can usually reach the level where nobody within the section or even higher can solve them, except for example the top administrator of the university who can use his decision-making power. In a case where the problem is even more critical, the politicians who relate to the government that owns the higher education institutions may also get involved.

Fourthly, there is the issue of some sections of the university system being less effective. Even though this can make the academics become dissatisfied, they have to admit that no organisation is perfect in its system. The higher education organisation is not exceptional in suffering from some slackness, especially in administration related matters, particularly as the top management and the head of departments are not management trained in background, but instead are education trained by profession. As it is the policy and common practice of HEI to appoint them and some administrators from among the academics, those who are selected tend to just carry on with the management tasks - just doing things, and improving by experience. After all, when Taylor P.G. (1999) has stressed earlier that higher institutions should always be ideally efficient, this implies the tendency for it to happen not as easy as in the theory. The definite advantage that they have is that they share the same feelings as an academic. Therefore, in any decision and move they make, they can easily understand generally what are the needs of the academics and their expectations.

Fifthly is the next identified constraint, which is the phenomenon of too much bureaucracy. One of the highlighted problems is the unacceptable way of handling instructions and administration in a top-down basis. According to them, these practices should be substituted with an alternative practice that is suitable and effective under the current context. After all, the top-down management system is not a more popular practice to be implemented in any education organisation nowadays than the bottom-up and middle-up-down management practices, which are always available as an option (Ahmad, 2002). A further method of discussing the overall issue of bureaucratic phenomena in HEI is by looking from the root of the process of HEI operation. The filtering process has been done in selecting the academics. In general, only those who have good academic qualifications will be chosen, besides having an additional requirement to have a final degree later on of at least a Masters in their specialisation. Even though there are some worries by the researcher too that some current professors were appointed at the beginning without having good qualifications⁴⁸, these cases are very rare and do not represent the general procedure of appointing the academics. This means that HEI are the only places in the country that have the academics as a useful and an excellent resource for providing high level knowledge and skills. In addition, the main duty of all parties in HEI, including the administrators, supporting staff and students, is to aim for knowledge sovereignty. When everybody in HEI is associated with knowledge development, the HEI themselves become the places where people can put their trust as a catalyst toward nation building. The history of any development of nation building, industrialisation and modernisation in the world are all based on

⁴⁸ This refers to what qualification they have when they were appointed as academics, not as in the evidence earlier saying that more than 40% is not accountable at the time they were appointed as professors.

knowledge manipulation. So the people in HEI should handle the knowledge development matters themselves freely, without bureaucracy interruption. Therefore it is understood why the academics in Malaysia express concern for any bureaucracy related to academic matters involving HEI, and particularly if the academics are to be reduced, if not disappear altogether. They have the opinion that, while the top management in the universities should be better at understanding this because they know what the academics expect, the educational authority outside could also consider letting the academics and university management (most of them are also academics by nature) deal with any aspect of academic matters freely without many hindrances. On top of that, political, financial, more allocation, technical and moral support from the government to smooth this process, is even more sought after by them.

Sixth is the concept of a holistic or integrated education process, which is in fact less emphasised in the NEP. The aim of this concept is to produce graduate students who are versatile and well rounded. They are a kind of younger generation that the country has been targeted to have who are dynamic, full of confidence, and creative in whatever place they are in the job market. The country will gain benefits from them in fostering the developing nation. The academics are also indirectly becoming holistic in approach, as they are the ones who are responsible for initiating this concept. The positive indication of this will be when in future, people - particularly those in the country - will no longer talk about what kind and class of degree you have, but what is your capability based on your learning experience in solving a very critical and challenging task, if it is to be handled by you. This is a target that the researcher tries to propose which is too

realistic for Malaysians, but at least efforts towards it are not impossible to be always geared.

Seventh is the issue of having financial, facilities and resources in HEI which are below expectation. Among a number of things which may be lacking that can happen in HEI, these three elements have been mentioned repeatedly by the academics. The academics also believe that if the problems are resolved, these elements would bring a strong impact into HEI in order to keep it being sustained. Financially, the allocation for higher education from the annual budget should be increased to provide a more conducive environment for carrying on any academic roles, and for the learning process. This is in line with the fast developing Malaysia too. Facilities and resources, on the other hand, refer to any kind of physical things that are able to be used by the university residents for the sake of utilising and manipulating the available knowledge. It has been mentioned by the academics in this case that the facilities in HEI are still insufficient to cope with the current demands of the students and academics, in line with the current explosion of knowledge worldwide. In taking just one aspect, for example – the resources in the library, which is understood to be a heart to knowledge construction and development in HEI, there is still a lack of required reading material in the universities in Malaysia in general. This argument is supported by Lebar (2002), who states that the collection of resources in Malaysian university libraries is much less in quantity and completeness when compared with the university libraries in the west. To make his argument concrete, and in a way to oppose any opinion saying that of course the west is more advanced and no wonder they are much better in this, he gave a cynical example, saying that in one university in the USA, the reference collections related to South East Asian countries,

and even relating to Malay studies, were more extensive than in some universities in Malaysia.

The eighth point is about the process of integrating the religious elements in the HEI system, which is thought to contain a lot of positive values. Spiritually and practically, the existence of religious elements anywhere in the context of Malaysia is presented and understood by the positive way in which an individual expresses their belief and devotion to God. In order to support these arguments, it is a fact that religious elements have been the most important pillar in the formation of NEP from the beginning and keep their relevance today (Lebar, 2002). Lebar added that this element is absolutely needed in multi racial and religious countries like Malaysia, to produce educated and moral citizens. This means that people of other faiths, not only the majority Muslims, are happy about the integration of this element in NEP, because the religious values stated here are universal and suitable for all Malaysians. After all, the religious element (belief in God) is one of the principles of *Rukun Negara*⁴⁹ that make even agnostics and atheists adhere to it. The lack of initiative in implementing this in accordance with NEP has therefore become one of the important identified constraints in the country. There could of course be a religious emphasis without NEP, but then nobody cares if there is less emphasis. However, with the existence of NEP, the religious element has become official, and an implementation failure would mean a lot to people of Malaysia, especially the policy makers. In fact, in explaining this constraint more worriedly, the

⁴⁹ *Rukun Negara* is a kind of National Ideology that the country has that become part of the spirit and principles of Federal Constitution (Faizal, 2005). It has five principles which are 1) Believe in God, 2) Loyalty to King and Country, 3) Supremacy of the Constitution, 4) Supremacy of Law, and 5) Courtesy and Consideration.

religious element has been reported as not being well integrated into any aspect of academics' routines and activities in HEI.

The ninth point is about the need for the students to change their emphasis from aiming only for paper qualifications while studying in the university. Without waiting for the holistic education to be widely covered in HEI, students should use their own initiative to grasp any kind of knowledge and experience while in the universities. Besides formal knowledge relating to their field of study obtained from lectures, they could have wide opportunities to add knowledge from any available resources, in connection with and supporting what they have learned previously, which will make their understanding of a body of knowledge become clearer, stronger and more practical. In addition, it is also important for them to associate the knowledge with their appearance, attitude, and confidence; and also the co-curriculum activities and organisation exposure. This is the culture that needs to be possessed by all the students, instead of just aiming blindly for paper qualifications which do not promise much, especially when facing the globalisation era and when the job market is becoming so competitive. Students with this culture are not afraid of any reduction in employment because of, for example, an economic downturn as faced by Malaysia currently. They will see that in the job market it is not necessary only to work for somebody else and only inside the country, but that there is an option to look internationally. The culture of just thinking solely about paper qualification sometimes can make students even turn to cheating in order to achieve what they think is the ultimate target for knowledge seeking.

Tenth is the next constraint, which is when the academics focus more on their careers instead of knowledge development. It creates tension when everybody chases for this, and when it becomes the emphasis and is highlighted in both formal meetings and informal conversations. However, the promotion process has been limited according to budget allocation and to those who possess special criteria that make them deserving in this respect. The limitation is also set to maintain the integrity of the HEI themselves. However, in some circumstances, there are cases where some promotions have been questioned by the academics. The unusual appointments and promotions could also happen when some other factors are involved, for example political influence, preference, and in the new policies establishment, for example when an institution is drastically upgraded to become a university, and offers immediate positions and vacancies. All these factors make HEI appear as a place where academics can be seen struggling to achieve appointments and promotions, and some are even competing among themselves to some extent, which can harm relationships. Because of this orientation, it is therefore common to see less discussion among the academics about new initiatives that they should take in upgrading the current situation of academic development, in particular involving the students. Even though people would prefer that this kind of struggle and competition be avoided, the process towards that is full of thorns. The academics have spent many years of their life seeking for critical and useful knowledge through their studies, yet their job and income satisfaction is generally below expectation when compared with other people of the same age outside. Maybe this is something that the government can think about when revising any scheme involving the academics, for the sake of job satisfaction, which will bring an improvement in quality and productivity

The eleventh point is about assigning the academics to teach courses with which they are not familiar. While this situation can commonly happen, it should at the same time be avoided as far as possible. The negative impacts can vary from small to large, depending on how critical the knowledge is, and coverage of the subjects. Both parties can experience the disadvantages in some ways. The academics will be slower in the process of becoming expert in certain fields, as some of their time have also to be devoted to other areas which are new to them. The students, on the other hand, will not be able to get the full range of a particular field of knowledge, but maybe only superficially. This can be a waste in the whole process of human development in HEI. In order for this situation to be improved, the smallest academic individual units up to governmental level should take this issue seriously, not only to make the HEI system in Malaysia become more recognised in general, but to ensure that it is also in parallel with the process of achieving the developed Malaysia as conceived.

Twelfth is about another factor that can disturb the NEP implementation, which is the poor standard of the English language among the students and academics. Going deep to the root of this problem, actually, when the standard of English is low, we should consider two basic things. The first is to understand why they are not good at English, while the second looks for the solution. The way to understand why the students are not good at English is to look at the weak aspects of the English learning process in Malaysia. The most likely contributory factor is that people in the education environment in Malaysia can feel comfortable without being good in English, as it is not absolutely required in order to enter into any level in the education system.

The possible solution for this is in realising how the weakness can be changed. The best way is through policy changing, and the latest move by the government to require Science and Mathematics subjects to be taught in English in schools is a good move toward that. Of course it will take time to implement this, and it might be a promising idea but may not work in practice. However, the move has been bravely initiated and is open to any improvement procedure in future in any event. Another solution is to find ways in which, in future, communication, reading and writing in English can be widely practiced in order to ensure that usage is expanded and improved. While the former move is in progress, the latter is also possible, as the country has sufficient facilities and resources. In addition, the English language is not strange and new to any Malaysian, as it has been used since long before independence in 1957, in the colonial era. This means that having English not as a first language, and also many languages being spoken at the same time in the country, should not be a problem.

If the solutions are fulfilled, then high English language proficiency, particularly among the students and the academics in the universities, can become a reality. This expected result can become clearer when we make a comparison between Malaysia and another country that shares some common background. Research evidence shows that even in a relatively poor country with limited teaching, physical and training resources, and with many languages being spoken - for example in Dominica - the children in schools can still achieve the international standard of English ability, particularly in writing (Jan Abd-Kadir et al., 2003). Students and academics in universities therefore should be able to do better.

In Malaysia, even though the first language is not English, English has been officially becoming a second language for a long time, and Malaysia is also part of the Commonwealth, like Dominica, which has a considerably strong English language influence in its background. It is considered fair to compare with Dominica here, at least in terms of saying that, 'they do it, therefore Malaysian can do it'. Furthermore, Malaysia has always been understood as having comparatively sufficient teaching, physical resources and training for the teachers. In addition, the language diversity that exists in Malaysia should not be a reason for the students in schools up to the academics in the universities not to be good in English, as a country like Dominica also shares the same characteristic. (Language diversity is considered here for comparative reasons, even though some are not involved with this in both countries). So, even though only some characteristics are common in both countries, they are relevant in connection with learning English, and Malaysia can base its policies on this reasoning, plus other moves to make English ability among its people - particularly in HEI - improve.

English proficiency, particularly for those in the universities, from the students to of course the academics, is very important for a rapidly developing country like Malaysia nowadays. In fact, the role of the English language in higher education in most countries is of crucial importance nowadays, where it can be treated as a means to an end, as shown for example by the usage amongst various disciplines especially in assessing great texts of references (Towell, 2004). Even the students in the universities in the U.K. - as a country where everybody uses English - have been recommended by the government to learn other languages, particularly Oriental and African languages, to

meet the increasing demands on trade, industry and diplomacy (Byram et al., 1992). So to stress English competence in universities in Malaysia is necessary, as the nature of that language itself is as a world language that is used worldwide for any business and global purpose. After all, the principal languages of instruction in the formal education system in Malaysia also include English (UNESCO, 1996).

A drastic step should therefore be implemented to overcome the problem of English in Malaysia right from the beginning. Nevertheless, there have been good moves in recent times, with some subjects being taught in English in schools and universities, and also a special English test needing to be undertaken by the students before entering the universities. However, this is not a direct contradiction to what has been stated earlier which claims that English language is not a criterion for a university entrance, because it is not practiced anymore. Other additional steps and measures could also start to be imposed at all levels of education, to monitor each student as this problem can be connected to their individual attitudes, as discussed above.

The thirteenth point is about the poor quality students that enter university. This situation has been created, and happened for a few reasons. For example, the student of relatively poor academic quality can still be offered a place in the university if there are fortunately still available places in the quota. The quota system has been implemented for university intake since long ago. It closely relates to the national, political, economic and social policies. These policies have been reformed from time to time, but the quota formula has always been there and harmoniously accepted, even if with different kinds of approaches. The most relevant policy to the quota system is the New Economic

Policy⁵⁰ that gives priority to the indigenous people in education and economic sectors. The current policy is the meritocracy system, but by not exactly representing its name, it still involves a quota system in some ways. Whatever it is, in just assuming that poor quality students, both in academic work and even in behaviour (which is in line with the current social phenomenal) will definitely exist in HEI, what responsible people should think and prepare for is not how to avoid them coming in, but how to prepare resources that can overcome the weaknesses or can even possibly change them into a strength or advantage.

Fourteenth and lastly is the situation where most academics do not have a good relationship with outside practitioners, especially those who hold the top positions or even the owners of well-established organisations. The most likely reason for this to happen is because the academics themselves are not competent enough practically in the particular areas concerned. They may be excellent in the aspect of theory, but not in practical aspects (and vice versa). Therefore, the mutual competency between the two groups is hard to realise. When there is no connecting point between them, this is why these kinds of academics cannot be very supportive in terms of trying to connect their delivered knowledge with what happens in the career world.

6.2.3. The rational of composition ratio of the two elements of the research findings

In this section of 6.2 (and this chapter as well), the two main elements being referred to in the discussions are the results of the surveys and the factors relating to productivity

⁵⁰ This policy is stated and existed since 1970 and everybody in Malaysia is aware of it as part of a social contract in restructuring Malaysian society, and it also includes a unique access policy to higher education (Educational Planning and Research Division, 2001 pg.112).

and aspect of NEP implementation in HEI in Malaysia. However, almost all of the conclusions and discussion of findings above comes from the NEP work. Although the researcher has mentioned them and integrates them into the above, it seems not enough if to be compared like by like.

In explaining this, it is noted that the results of the surveys and the factors relating to productivity have been heavily touched in Chapter 4, compared to what has been touched about the NEP implementation partly in Chapter 4 and mostly in Chapter 5. The results about the productivity of academics are straight forward to be explained as they are objectively stated in the related research questions. Therefore, they are assumed here as not to need a complex and long explanation in providing arguments for the conclusions and discussion of the respective findings.

On the other hand, the results about NEP implementation in HEI, especially for about any constraint that could happen were provided subjectively and open for unlimited type and angle of views. This is why the results in regard to this have a longer explanation in making the discussions as clearly and completely as possible in understanding the readers.

6.3. Recommendation for future research

In giving any recommendation for future research following on from this research, the procedure of data collection by using the academics' perspective will be maintained.

This approach consists of both elements of self and peer assessment, which is considered a new approach in replacing the traditional approach that uses the management and student evaluation for assessing the academics' performance. There was one recommendation made in this writing previously, suggesting that another research project - duplicating the methodology of this research – should be conducted, but using a sample of a wider range of academics, and ideally having representatives from all public universities in Malaysia in their respective proportions. In addition to this, the researcher would also add five more recommendations.

Firstly, the same approach as in this research could be replicated, but the sample needs to be replaced by the academics across private higher education institutions instead. Therefore the data output is not going to represent public universities any more, but instead the private higher education institutions, which are also important and contribute in providing any available information about the process of higher education, academics' productivity and NEP implementation at a tertiary level in Malaysia.

The second point refers to the quite significant percentage of professors in the universities in Malaysia who are thought of as not deserving to become a professor. In order to confirm whether this perspective is only true in Malaysia or common in other countries too, it is suggested that the same research should be conducted again, but this time with sample academics from other universities elsewhere in the world. In the context of conducting this kind of research in the U.K., it is quite possible, as there are many academics around who are attaching to certain universities in some countries but are here for study and sabbatical leave, holidays, and post doctorate programme. So, it

would be informative to see what response academics (who come from countries other than Malaysia) would give to the same questionnaire. In making comparison with this research after that, perhaps the findings could possibly be the same as obtained in this research, and therefore a conclusion could be made in confirming that there are 'some undeserving professors' everywhere in general, or that there is a perspective everywhere that there are "undeserving professors".

Thirdly, further studies need to be conducted to identify other factors that affect the academics' productivity. The new factors to be defined are the ones that were not touched on in this research but are thought of as important in the current scenario of HEI in Malaysia. Some of them maybe would newly be recognised later on in the future.

The fourth recommendation focuses on the level of knowledge of the academics on NEP, and the problems that can still happen alongside the NEP implementation. Further studies could be conducted following on from this, but this time the academics' understanding of NEP should be measured in depth. Rather than just asking them how much they know about NEP, a research technique that can measure their understanding thoroughly by also using their perspective and opinion seems more suitable for this purpose. In addition, the next studies can be conducted in order to obtain their perspective on how can they contribute towards achieving the NEP implementation to a greater extent, rather than to just comment about the current constraints that occur.

The fifth point is in response to some suggested constraints that can happen alongside the NEP implementation in HEI. The recommendation for the next research project

therefore could be to see ‘how can policy changes (to reduce the particular constraints) increase productivity or NEP implementation in HEI’. In the recommended research, just take a few constraints to be practically controlled, maybe just take one example – bureaucracy. In a type of experimental research, first measure the productivity and NEP implementation in certain ways, then give treatment. The treatment is a set of policy changes, for example in reducing the bureaucracy by providing a specific secretary and a computer; or providing a booklet to everyone at any level who is involved, where the booklet contains a list of guides to be followed. The research could be on a small scale, but would be much better if on a large scale. After that, measure again the outputs of productivity or NEP implementation. Make sure the validity of the measurement before and after the treatment is maintained. From the data, see whether the treatment significantly makes positive changes. It is expected that the treatment will bring better outcomes, but it may not have any significant effect, and if this happen, the booklet maybe has not even been opened, or the particular policy changes are not suitable so that there is a need to use other alternative approaches.

6.4. Concluding remarks

In conclusion, this research seems to have made three major contributions towards the process of continuous improvement of the operation of higher education in Malaysia. All are based on the academics’ perspectives themselves. The first one is to confirm that generally, the academics in any position or situation can be effective or productive in the teaching role. However, not every academic can be good at conducting research and

administration. Many factors that can become constraints and the insufficiency of finance, facilities and encouragement should be overcome at the earliest possible date.

The second point is about the less preferred situation whereby more than 40% of Malaysian public universities' professors have been seen as not deserving to be appointed to that position for a few reasons related to productivity. The feeling of poor satisfaction is widespread and it is expressed openly or quietly. People may think that such professors have taken a place which other academics who are more deserving should have.

Thirdly, while the NEP in general is fairly well understood and implemented, there are still plenty of problems, and constraints can still exist that can keep on giving risks. This needs to be traced, identified and then solved continuously to maintain the NEP integrity in future. This shortcoming, and also the other possible weaknesses, need to be overcome as far as possible in fostering the development of Malaysia, particularly in the higher education sector.

All in all, it is hoped that this research will give clear indicators concerning the productivity of the academics, and also give a new dimension to the implementation of NEP in HEI in Malaysia. Better quality academics and students, as mainly stressed in this research, should be produced in future in conjunction with this research.

APPENDICES

List of Public University in Malaysia with details of Establishment

Malaysian Public Higher Learning Institutions (University & University College)	Location	Date of Establishment
Universiti Malaya (UM)	Kuala Lumpur	1-1-1962
Universiti Sains Malaysia (USM)	Penang	June 1969
Universiti Kebangsaan Malaysia (UKM)	Bangi, Selangor	18-5-1970
Universiti Putra Malaysia (UPM)	Serdang, Selangor	4-10-1971
Universiti Teknologi Malaysia (UTM)	Johor Bahru, Johor	14-3-1973
International Islamic University Malaysia (IIUM)/(UIA)	Gombak, Selangor	10-5-1983
Universiti Utara Malaysia (UUM)	Sintok, Kedah	16-2-1984
Universiti Malaysia Sarawak * (UNIMAS)	Kuching, Sarawak	24-12-1992
Universiti Malaysia Sabah * (UMS)	Kota Kinabalu, Sabah	24-11-1994
Universiti Pendidikan Sultan Idris (UPSI)	Tg. Malim, Perak	24-2-1997
Kolej Universiti Islam Malaysia (KUIM)	Negeri Sembilan	13-3-1998
Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM)	Terengganu	15-7-1999
Universiti Teknologi MARA (UiTM)	Shah Alam, Selangor	26-8-1999
Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM)	Melaka	20-9-2000
Kolej Universiti Teknologi Tun Hussein Onn (KUiTTHO)	Batu Pahat, Johor	30-9-2000
Kolej Universiti Kejuruteraan Utara Malaysia (KUKUM)	Arau, Perlis	25-7-2001
Kolej Universiti Kejuruteraan dan Teknologi Malaysia (KUKTEM)	Kuantan, Pahang	March, 2002

Note: * Located in East Malaysia, and all the rest are in Peninsular Malaysia

Source: Ministry of Higher Education, Malaysia

Subject: Online questionnaire - Malaysian Academics - PILOT STUDY

From: aminuddin hassan <aminuddin.hassan@durham.ac.uk>

Date: Wed, 15 Dec 2004 13:14:55 +0000

To: "A.B.I Idris-bin-Matasip" <A.B.I.Idris-bin-Matasip@newcastle.ac.uk>, F Abd Rahman <edp03fa@sheffield.ac.uk>, Mahadi Sibon <mahadi.sibon@unn.ac.uk>, razali othman <razaliupm@yahoo.com>, zurina.shafii@durham.ac.uk

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Sekian, jutaan terima kasih di atas budi dan usaha tuan yang tak ternilai ini.

Kepada Rakan-rakan Staf Akademik IPTA sekalian,

Saya merupakan salah seorang staf IPTA yang sedang menjalankan kajian kedoktoran di Durham School of Education. Saya berbesar hati sekiranya rakan-rakan seperjuangan sekalian sudi kiranya membantu melengkapkan soal selidik yang saya lampirkan di sini yang melihat kepada Perspektif Ahli Akademik di Malaysia Berkenaan dengan "Faktor yang Mempengaruhi Produktiviti" dan "samada Falsafah Pendidikan Kebangsaan Telah Berjaya Dilaksanakan di Dalam Operasi Institusi Pendidikan Tinggi di Malaysia Sekarang ini". Sebagai mematuhi kelulusan yang diberi oleh 'University of Durham Ethics Advisory Committee' di dalam melaksanakan kajian ini, sebarang maklumbalas anda akan di kendalikan dengan penuh kerahsiaan, dan hanya akan diketahui oleh saya dan penyelia saya. Lagipun, jelas kelihatan tidak ada cara untuk saya mengenali anda memandangkan maklumbalas soal-selidik yang anda telah lengkapkan dan kemudian kembalikan hanya akan saya terima dalam bentuk output tanpa memberi sebarang maklumat 'email' sesiapa yang menghantarnya.

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Sila klik salah satu di antara dua versi berikut dan selepas melengkapkannya, sila klik di butang 'Submit the form' untuk menamatkannya.

English version: <http://www.dur.ac.uk/aminuddin.hassan/survey.htm>

Versi B.Malaysia: <http://www.dur.ac.uk/aminuddin.hassan/soal-selidik.htm>

Sincerely,

Aminuddin Hassan (Mr.)

Doctoral Researcher, School of Education, University of Durham

Leazes Road, Durham, DH1 1TA, UK

Email: aminuddin.hassan@durham.ac.uk

Tel: +44 0191 334 8401 (research room) Fax: +44 0191 334 8311

[English translated version for email message in Appendix 2a – Message of 1st Pilot Study]

Subject: Online questionnaire - Malaysian Academics - PILOT STUDY

(Greetings),

I seek your help in 'forwarding' this email to other academic colleagues who you know are attached to any Public Higher Education Institution in Malaysia but are on study leave in the UK (especially those studying in the same university as you). You are not required to fill the questionnaire as I know you. When you 'forward' this to them, please send the copy to me for the purpose of identifying the 'response rate' later on. Be assured that, under this procedure, the recipients' responses will remain anonymous as anyone who response will not be made known to me. This is the main procedure for me to control the confidentiality of research response.

That's all, million of thanks for your very valuable kindness and effort.

To all my respective academics colleagues in Public Higher Education Institutions (PHEI),

I am a PHEI staff doing a doctoral degree at Durham University (School of Education) in the UK. I enlist your help in completing the attached questionnaire looks at the Perspective of Academics in Malaysia concerning "Factors Affecting Productivity" and also "on whether the National Education Philosophy has been Successfully Implemented in the Current Operation of Higher Education Institutions in Malaysia". In accordance with 'University of Durham Ethics Advisory Committee' in conducting this research, any response from you will be treated anonymously and confidentially and will only be known by myself and my supervisor. There is no way for me to know who you are because your completed questionnaire will be returned to me, without the email address of the recipient.

This online questionnaire has two versions – English and Malay versions (as specified below). It is up to you to choose whichever one you like. I will be grateful if you complete this questionnaire as soon as possible after you receive it. Thank you for your anticipated, cooperation and consideration in making this study a success.

Please click any of two versions below and after completing it, please click button 'Submit the form' to end it up.

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Sincerely,

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Tel: +44 0191 334 8401 (research room) Fax: +44 0191 334 8311

Sila catatkan masa anda mula memperlangkapkan soal selidik ini, dan sila maklumkan kepada saya di akhiran soal selidik ini berapa lama masa yang diambil untuk menamatkannya

Perspektif Ahli Akademik di Malaysia Berkenaan dengan “Faktor yang Mempengaruhi Produktiviti” dan “samada Falsafah Pendidikan Kebangsaan Telah Berjaya Dilaksanakan di Dalam Operasi Institusi Pendidikan Tinggi di Malaysia Sekarang ini”

Soal selidik ini mengandungi hanya tiga bahagian. Sebaik sahaja anda klik butang 'Hantar', hanya menandakan anda telah melengkapkannya. Soal selidik ini akan mengambil masa kira-kira 20 minit sahaja untuk dilengkapkan. Terima kasih banyak-banyak di atas kerjasama dan pertolongan yang diberikan dalam menjayakan penyelidikan ini.

A. Latarbelakang Peribadi

1. Jantina ☐ Lelaki ☐ Perempuan
2. Universiti di mana anda sedang bertugas
3. Taraf perkahwinan
4. Berapa ramaiakah ahli keluarga anda (tidak termasuk diri anda)
5. Bagaimana kesihatan diri anda secara amnya? ☐ Sangat Buruk ☐ Buruk ☐ Sederhana ☐ Baik ☐ Sangat Baik
6. Apakah status jawatan akademik anda sekarang?
7. Apakah tingkat jawatan akademik anda sandang sekarang?
8. Apakah ijazah tertinggi yang anda miliki?
9. Negara di mana ijazah tertinggi tersebut diperolehi?
10. Sudah berapa lama anda memiliki ijazah ini? tahun
11. Apakah bidang kepakaran anda sekarang?
12. Adakah bidang ini berkaitan dengan bidang ijazah tertinggi anda? ☐ Tidak ☐ Ya
13. Berapa lamakah anda telah berada dalam bidang ini? tahun
14. Sila nyatakan lain-lain kelulusan profesional yang anda miliki
15. Sudah berapa lama anda telah bertugas di universiti ini (termasuk tahun ini)? tahun
16. Sudah berapa lama anda pernah bertugas di universiti lain? tahun
17. Berapa lama anda pernah berkhidmat dengan kerja-kerja profesional di luar pendidikan tinggi sebelum menyertai universiti ini? tahun
18. Bagaimana anda menilai kualiti latihan kakitangan akademik yang pernah anda perolehi setakat ini (jika anda pernah menjalani latihan tersebut)?
19. Berapa banyakkah organisasi akademik profesional yang anda menganggotainya? (jika anda masih terlibat) Di Malaysia Antarabangsa
20. Adakah bidang anda menyediakan banyak peluang terhadap kerjaya anda? ☐ Tidak ☐ Ya
21. Adakah persekitaran universiti menyediakan suasana menggalakkan untuk anda melakukan tugas anda?
22. Apakah kelulusan tertinggi akademik ketua unit akademik terkecil yang anda berada di dalamnya?

Pengukuran Produktiviti

23. Secara kasarnya, berapa peratuskah (kepada penjumlahan 100%) dari waktu pekerjaan anda diperuntukkan kepada komponen-komponen akademik berikut dan juga kepada 'perkara lain' dalam tempoh 24 bulan yang lalu?

Berkaitan dengan Pengajaran	<input type="text"/> %	Berkaitan dengan Penyelidikan	<input type="text"/> %	Berkaitan dengan Pentadbiran	<input type="text"/> %	Perkara-perkara lain	<input type="text"/> %
-----------------------------	------------------------	-------------------------------	------------------------	------------------------------	------------------------	----------------------	------------------------

24. Sila lengkapkan jadual di bawah untuk menunjukkan berapa banyak pengajaran yang telah anda lakukan dalam 24 bulan yang lalu

	Bachelor	Master	Phd dan Lain-lain
Bilangan Kursus diajar	<input type="text"/>	<input type="text"/>	<input type="text"/>
Bilangan Pelajar	<input type="text"/>	<input type="text"/>	<input type="text"/>

Nota: Untuk soalan-soalan No. 25, 28 and 30 di bawah, sila anggarkan nilai tugas pengajaran, penyelidikan dan pentadbiran anda. Untuk setiap RM100 yang dibelanjakan untuk membayar gaji anda, berapakah pendapatan yang boleh dicipta daripadanya dengan mengambilkira tugas-tugas ini yang dilakukan di sepanjang 24 bulan yang lepas?

25. Sila buat anggaran untuk perkara berikut: Bagi setiap nilai RM100 bagi tugas pengajaran yang anda lakukan, berapa banyakkah pendapatan yang dapat dihasilkan untuk Malaysia oleh pelajar anda? Tiada pengajaran dilakukan sepanjang tempoh ini

26. Berapa banyakkah hasil penyelidikan yang telah diterbitkan dalam tempoh 24 bulan yang lalu untuk kategori-kategori berikut?

Buku-buku Akademik	<input type="text"/>	Laporan-laporan Penyelidikan	<input type="text"/>	Artikel-artikel Jurnal	<input type="text"/>
Artikel-artikel Bukan Jurnal	<input type="text"/>	Bab-bab di Dalam Buku	<input type="text"/>	Kertas-kertas Konferens	<input type="text"/>
Penyuntungan Buku	<input type="text"/>	Lain-lain	<input type="text"/>		

27. Adakah anda berpendapat dengan bertambah panjangnya setiap kerja penulisan di atas akan meningkatkan kualitinya? ☐ Tidak ☐ Ya

28. Adakah standard setiap kerja penulisan di atas berbeza antara yang dilakukan di peringkat nasional ataupun antarabangsa? ☐ Tidak ☐ Ya (sila nyatakan bagaimana/mengapa bagi jawapan anda)

29. Sila buat anggaran untuk perkara berikut: Bagi setiap nilai RM100 bagi kerja-kerja penyelidikan yang anda lakukan, berapa banyakkah pendapatan yang dapat dihasilkan untuk Malaysia dari kerja-kerja tersebut? Tiada penyelidikan dilakukan sepanjang tempoh ini

30. Tanggungjawab-tanggungjawab pentadbiran yang begitu ketara yang anda terlibat adalah

31. Sila buat anggaran untuk perkara berikut: Bagi setiap nilai RM100 bagi tanggungjawab-tanggungjawab pentadbiran yang anda lakukan, berapa banyakkah pendapatan yang dapat dihasilkan daripadanya? Tiada kerja pentadbiran dilakukan sepanjang tempoh ini

32. Bagaimana produktifkah anda dalam tugas pengajaran, penyelidikan dan pentadbiran? [Sila beri nilai mengikut skala 0-10 di mana 0 (tiada aktiviti), 1 (kurang produktif) sehingga 10 (sangat produktif)]

Pengajaran	<input type="text"/> 0 <input type="button" value="v"/>	Penyelidikan	<input type="text"/> 0 <input type="button" value="v"/>	Pentadbiran	<input type="text"/> 0 <input type="button" value="v"/>
------------	---	--------------	---	-------------	---

33. Berapa peratuskah di kalangan professor di universiti anda yang anda rasakan layak dilantik ke jawatan tersebut pada waktu mereka dilantik, dengan melihat kepada keseluruhan produktiviti mereka pada masa itu? %

Perlaksanaan Falsafah Pendidikan Kebangsaan (FPK) di Institusi Pengajian Tinggi (IPT) di Malaysia

34. IPT hari ini bersifat dinamik dari segi usahanya yang berterusan terhadap pembangunan potensi::

a) para pensyarah	<input type="text"/> Tidak Setuju <input type="button" value="v"/>	b) para pelajar	<input type="text"/> Tidak Setuju <input type="button" value="v"/>
-------------------	--	-----------------	--

35. Pembangunan pengetahuan di IPT diterjemahkan dalam bentuk menyeluruh dan bersepadu yang berlaku terhadap:

a) para pensyarah	<input type="text"/> Tidak Setuju <input type="button" value="v"/>	b) para pelajar	<input type="text"/> Tidak Setuju <input type="button" value="v"/>
-------------------	--	-----------------	--

36. IPT yang sedang saya berada di dalamnya telah terbukti sentiasa melahirkan graduan yang menjadi rakyat Malaysia yang:

i) cukup berpengetahuan dan berkeupayaan	<input type="text"/> Tidak Setuju <input type="button" value="v"/>
ii) memiliki tahap moral yang tinggi	<input type="text"/> Tidak Setuju <input type="button" value="v"/>
iii) bertanggungjawab dan mampu mencapai tahap kesejahteraan diri yang terpuji	<input type="text"/> Tidak Setuju <input type="button" value="v"/>
iv) memberi sumbangan terhadap keharmonian dan kemakmuran keluarga, masyarakat dan negara	<input type="text"/> Tidak Setuju <input type="button" value="v"/>

37. Setiap individu pelajar atau ahli akademik di IPT, dalam tempoh waktu ditetapkan, akan menjadi seimbang dan harmoni di akhiran proses tersebut dari segi:

a) intelek	Tidak Setuju	b) rohani	Tidak Setuju
c) emosi	Tidak Setuju	d) jasmani	Tidak Setuju

38. Setiap empat elemen pencapaian (a-d) di atas adalah berasaskan kepada kepercayaan dan kepatuhan yang jitu kepada Tuhan (Saya merujuk kepada kepercayaan setiap individu pelajar dan ahli akademik tersebut)? (Tidak setuju kepada Setuju - mengikut nilai dari 1 sebagai 'sangat tidak setuju' kepada 5 sebagai 'sangat setuju')

a) intelek	1	b) rohani	1	c) emosi	1	d) jasmani	1
------------	---	-----------	---	----------	---	------------	---

39. Bagaimana berkesanlah pelaksanaan FPK di IPT di Malaysia? Sangat Buruk

40. Sila nyatakan jika ada sebarang masalah atau kekangan yang anda rasa dihadapi oleh ahli akademik dalam pelaksanaan objektif FPK di IPT dan adakah apa-apa cadangan terhadapnya?

41. Adakah anda bersedia untuk ditemuduga secara telefon sebagai susulan kepada penyempurnaan soal-selidik ini?

☐ Tidak ☒ Ya

42. No. Kad Pengenalan (baru) Ini bertujuan untuk mengelakkan duplikasi dari segi maklumbalas soal selidik, dan tiada cara yang pasti yang saya boleh mengenali anda dari maklumat ini (Pilihan)

43. Berapa lama diambil untuk anda menyempurnakan soal-selidik ini? Lebih kurang minit

44. Adakah anda mempunyai sebarang komen untuk memperbaiki soal-selidik ini?

[Submit the form](#) [Reset the form](#)

Please note the time you start to fill in this questionnaire and kindly let me know how long it has taken you to fill at the end of this questionnaire

The Perspective of Malaysian Academics Concerning “Factors Affecting Productivity” and “on whether the National Education Philosophy has been successfully implemented in the Current Operation of Higher Education Institutions in Malaysia

This questionnaire contains only three sections. By clicking the 'Submit' button means you have completed it. This questionnaire will only take about 20 minutes of your time. Thank you very much for your kind assistance and cooperation

Background Information

1. Gender ☐ Male ☐ Female
2. University you are attached
3. Marital Status
4. How many family members do you have (excluding yourself)
5. What is your general condition of health? ☐ Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Very Good
6. What is the term of your current academic post
7. What is your current academic rank at this university?
8. What is the highest degree that you possess?
9. Country where the highest degree was obtained
10. How long is it since you obtained this degree? years
11. What is your current major field of expertise
12. Does this field relate to your highest degree? ☐ No ☐ Yes
13. How long have you been in this field? years
14. Please state any other professional qualifications you have
15. For how many years have you been employed at this university (include current year) years
16. For how many years were you employed at other universities? years
17. For how many years were you employed in professional work, before joining a university years
18. How would you assess the quality of training that you have received for your role as an academic (only if you have been trained)?
19. How many academic professional organisations do you belong to (only if you do)? In Malaysia Internationally
20. Does your field of discipline provide many opportunities for your career? ☐ No ☐ Yes
21. Does the university environment encourage you to do your work?
22. What is the highest academic qualification of the head of the smallest academic unit that you are attached to?

Productivity Measurement

23. Roughly what percentage (total 100%) of your working time was devoted to the following academic components and other things over the past 24 months?

Teaching related <input type="text"/>	Research related <input type="text"/>	Administrative related <input type="text"/>	Other Things <input type="text"/>
%	%	%	%

24. Please complete the table below to show how much teaching you have done in the past 24 months

	Bachelor	Master	Phd and Other
No. of Courses	<input type="text"/>	<input type="text"/>	<input type="text"/>
No. of Students	<input type="text"/>	<input type="text"/>	<input type="text"/>

Note: For the following questions No.25, 28 and 30, please estimate the worth of teaching, research and administration. For every RM100 that is spent on your salary, how much wealth will be created, considering your duties in the last 24 months?

25. Please try to estimate this: For every RM100 worth of teaching that you do how much income will be generated for Malaysia by your students? No teaching done at this period

26. How many works have you published in the last 24 months under the following categories?

Academic Books <input type="text"/>	Research Reports <input type="text"/>	Journal Articles <input type="text"/>
Non Journal Articles <input type="text"/>	Chapters in Books <input type="text"/>	Conference Papers <input type="text"/>
Edited Books <input type="text"/>	Others <input type="text"/>	

27. Do you think that the length of the above written work increases its quality? ☐ No, I don't ☐ Yes, I do

28. Is the standard of the above written work different at international and national level? ☐ No ☐ Yes (please explain how/why to your answer)

29. Please try to estimate this: For every RM100 worth of research works that you do, how much income will be generated for Malaysia from it? No research done at this period

30. The most prominent administration responsibilities that you have been are

31. Please try to estimate this: For every RM100 worth of administration responsibilities that you do, how much income will be generated from it? No administration duties done at this period

32. How productive are you in teaching, research and administration? [Please rate on a 0-10 scale from 0 (no activity), 1 (least productive) to 10 (most productive)]

Teaching <input type="text"/> 0 <input type="button" value="v"/>	Research <input type="text"/> 0 <input type="button" value="v"/>	Administrative <input type="text"/> 0 <input type="button" value="v"/>
--	--	--

33. About what percentage of professors in your university do you think deserve to be appointed to that position at the time they were appointed, by looking at their overall productivity at that time? %

Implementation of National Education Philosophy (NEP) in Higher Education Institutions (HI) in Malaysia

34. HI are dynamic in their on-going effort towards further developing the potentials of the:

a) academics <input type="text"/> Not Agree <input type="button" value="v"/>	b) students <input type="text"/> Not Agree <input type="button" value="v"/>
--	---

35. The knowledge development in HI is presented in a holistic and integrated manner for the:

a) academics <input type="text"/> Not Agree <input type="button" value="v"/>	b) students <input type="text"/> Not Agree <input type="button" value="v"/>
--	---

36. The HI that you are attached to is proven to be producing the graduates as Malaysian citizens who are:

i) knowledgeable and competent	Not Agree <input type="button" value="v"/>
ii) of high moral standards	Not Agree <input type="button" value="v"/>
iii) responsible and capable of achieving a high level of personal well-being	Not Agree <input type="button" value="v"/>
iv) able to contribute to the harmony and betterment of the family, society and the nation at large	Not Agree <input type="button" value="v"/>

37. Each individual student or academic in HI within a specified time frame, will become balanced and harmonised at the end of the process in term of:

a) intellectually <input type="text"/> Not Agree <input type="button" value="v"/>	b) spiritually <input type="text"/> Not Agree <input type="button" value="v"/>
---	--

c) emotionally Not Agree ▼

d) physically Not Agree ▼

38. Are all the four above elements (a-d) of achievement based on a firm belief in devotion to God (I am talking about the individual student or academic's belief)? (No to Yes - rate it from 1 as 'strongly No' to 5 as 'strongly Yes')

a) intellectually 1 ▼

b) spiritually 1 ▼

c) emotionally 1 ▼

d) physically 1 ▼

39. How well has the NEP in HI been implemented in Malaysia? Very Poorly ▼

40. Please state any problem or constrain do you think faced by the academics in implementing the objective of NEP in HI and any suggestion in relation to all that?

41. Would you be prepared to participate in a telephone interview following this questionnaire?

☐ No, I can't ☐ Yes, I can

42. I. C. No.(new) This is used to discard duplicates in responses, and no way I can know you from this (Optional)

43. How long did you take to complete this questionnaire? About minutes

44. Do you have any comment(s) to improve this questionnaire?

[Submit the form](#)

[Reset the form](#)

This page is maintained by [Aminuddin Hassan](#), last updated Monday 13-Dec-2004 8:44 PM

Subject: Online questionnaire - Malaysian Academics - PILOT STUDY

From: aminuddin hassan <aminuddin.hassan@durham.ac.uk>

Date: Thu, 30 Dec 2004 02:46:50 +0000

To: jasri03@yahoo.co.uk, mohd.latif@uea.ac.uk, ajanuddin@bwt.co.uk

Assalamualaikum wbt dan Salam sejahtera,

Saya memohon jasa baik tuan untuk 'forward' kan email ini kepada rakan-rakan staf akademik IPTA Malaysia yang sedang menuntut di UK ini yang tuan kenali, terutamanya yang tinggal satu kawasan atau berhampiran dengan dengan tuan. Tuan sendiri tidak perlu mengisi questionnaire ini kerana tuan adalah orang yang saya kenal. Apabila 'forward' kepada mereka, sila cc (salinan) juga kepada saya untuk tujuan pemantauan, dan dalam keadaan ini pun, kelihatan tidak ada cara untuk saya mengenali mereka memandangkan response mereka akan saya terima hanya dalam bentuk output yang tidak mempunyai sebarang maklumat email penghantar output tersebut. Ini adalah tatacara utama saya dalam mengawal kerahsiaan maklumbalas kajian.

Sekian, jutaan terima kasih di atas budi dan usaha tuan yang tak ternilai ini.

Kepada Rakan-rakan Staf Akademik IPTA sekalian,

Saya merupakan salah seorang staf IPTA yang sedang menjalankan kajian kedoktoran di Durham School of Education. Saya berbesar hati sekiranya rakan-rakan seperjuangan sekalian sudi kiranya membantu melengkapkan soal selidik yang saya lampirkan di sini yang melihat kepada Perspektif Ahli Akademik di Malaysia Berkenaan dengan "Faktor yang Mempengaruhi Produktiviti" dan "samada Falsafah Pendidikan Kebangsaan Telah Berjaya Dilaksanakan di Dalam Operasi Institusi Pendidikan Tinggi di Malaysia Sekarang ini". Sebagai mematuhi kelulusan yang diberi oleh 'University of Durham Ethics Advisory Committee' di dalam melaksanakan kajian ini, sebarang maklumbalas anda akan di kendalikan dengan penuh kerahsiaan, dan hanya akan diketahui oleh saya dan penyelia saya. Lagipun, jelas kelihatan tidak ada cara untuk saya mengenali anda memandangkan maklumbalas soal-selidik yang anda telah lengkapkan dan kemudian kembalikan hanya akan saya terima dalam bentuk output tanpa memberi sebarang maklumat 'email' sesiapa yang menghantarnya.

Terdapat dua versi soal selidik yang akan dilakukan secara online ini - versi Bahasa Inggeris dan juga Bahasa Malaysia (sepertimana dinyatakan di bawah). Terserah kepada anda untuk memilih yang mana satu yang dikehendaki. Saya meminta jasa anda yang budiman untuk melengkapkan soal-selidik ini secepat mungkin sebaik sahaja menerimanya. Atas sebarang perhatian, kerjasama dan keprihatinan anda dalam menjayakan kajian saya ini, didahului dengan ucapan terima kasih yang tidak terhingga.

Sila klik salah satu di antara dua versi berikut dan selepas melengkapkannya, sila klik di butang 'Submit the form' untuk menamatkannya.

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Tel: +44 0191 334 8401 (research room) Fax: +44 0191 334 8311

[English translated version for email message in Appendix 3a - Message of 2nd Pilot Study]

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(Greetings),

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That's all, million of thanks for your very valuable kindness and effort.

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Leazes Road, Durham, DH1 1TA, UK; Email: aminuddin.hassan@durham.ac.uk

Tel: +44 0191 334 8401 (research room) Fax: +44 0191 334 8311

* (underlined): This is the only different in this message compared to the message as in Appendix 2b

Sila catatkan masa anda mula memperlangkapkan soal selidik ini, dan sila maklumkan kepada saya di akhiran soal selidik ini berapa lama masa yang diambil untuk menamatkannya

Perspektif Ahli Akademik di Malaysia Berkenaan dengan “Faktor yang Mempengaruhi Produktiviti” dan “samada Falsafah Pendidikan Kebangsaan Telah Berjaya Dilaksanakan di Dalam Operasi Institusi Pendidikan Tinggi di Malaysia Sekarang ini”

Soal selidik ini mengandungi hanya tiga bahagian. Ianya agak ringkas, dan purata masa yang diambil oleh seorang staf akademik untuk melengkapkannya sebelum ini tidak sampai pun 20 minit. Sebaik sahaja anda klik butang 'Submit The Form', ianya menandakan anda telah melengkapkannya. Terima kasih banyak-banyak di atas kerjasama dan pertolongan yang diberikan dalam menjayakan penyelidikan ini.

A. Latarbelakang Peribadi

1. Jantina ☐ Lelaki ☐ Perempuan
2. Universiti di mana anda sedang bertugas
3. Taraf perkahwinan
4. Berapa ramaikah ahli keluarga anda (tidak termasuk diri anda)
5. Bagaimana kesihatan diri anda secara amnya? ☐ Sangat Buruk ☐ Buruk ☐ Sederhana ☐ Baik ☐ Sangat Baik
6. Apakah status jawatan akademik anda sekarang
7. Apakah tingkat jawatan akademik anda sandang sekarang?
8. Apakah ijazah tertinggi yang anda miliki?
9. Negara di mana ijazah tertinggi tersebut diperolehi?
10. Sudah berapa lama anda memiliki ijazah ini? tahun
11. Apakah bidang kepakaran anda sekarang?
12. Adakah bidang ini berkaitan dengan bidang ijazah tertinggi anda ? ☐ Tidak ☐ Ya

- 13 . Berapa lamakah anda telah berada dalam bidang ini? tahun
14. Sila nyatakan lain-lain kelulusan profesional yang anda miliki
15. Sudah berapa lama anda telah bertugas di universiti ini (termasuk tahun ini)? tahun
16. Berapa lama anda pernah bertugas di universiti lain sebelum ini (awam ataupun swasta, dan sila beri nilai 0 jika anda tidak pernah bertugas di situ)? tahun
17. Berapa lama anda pernah bertugas/berpengalaman di dalam kerja professional yang lain di mana-mana sebelum menyertai universiti ini? tahun
18. Bagaimana anda menilai kualiti latihan kakitangan akademik yang pernah anda perolehi setakat ini (jika anda pernah menjalani latihan tersebut)? ☒ Tidak pernah menjalani latihan tersebut ☐
19. Berapa banyakkah organisasi akademik professional yang anda menganggotainya? (jika anda masih terlibat)? Di Malaysia Antarabangsa
- 20 . Adakah bidang anda menyediakan banyak peluang terhadap kerjaya anda ☐ Tidak ☐ Ya
21. Adakah persekitaran universiti menyediakan suasana menggalakkan untuk anda melakukan tugas anda? ☒ Pastinya Tidak ☐
22. Apakah kelulusan tertinggi akademik ketua unit akademik terkecil yang anda berada di dalamnya? ☒ Bachelor ☐

Pengukuran Produktiviti

23. Secara kasarnya, berapa peratuskah (kepada penjumlahan 100%) dari waktu pekerjaan anda diperuntukkan kepada komponen-komponen berikut dalam tempoh 24 bulan yang lalu? Tidak kira apa jua jawatan akademik anda, sila dengan jujur cuba untuk mengagihkan sebarang tanggungjawab akademik di sepanjang tempoh tersebut hanya di kalangan ketiga-tiga komponen yang pertama, dan bagi 'Perkara-perkara lain', ianya adalah merujuk kepada hal-hal bukan akademik ataupun peribadi. Jika penjumlahan akhir anda tidak sampai 100%, baki yang cukup itu juga akan dikira sebagai 'Perkara-perkara lain' .

Berkaitan dengan Pengajaran <input type="text"/> %	Berkaitan dengan Penyelidikan <input type="text"/> %	Berkaitan dengan Pentadbiran <input type="text"/> %	Perkara-perkara lain <input type="text"/> %
--	--	---	---

24. Sila lengkapkan jadual di bawah untuk menunjukkan berapa banyak pengajaran yang telah anda lakukan dalam 24 bulan yang lalu

	Tahap Bachelor ke bawah	Tahap Master dan yang setara	Tahap Phd dan yang setara

Bilangan Kursus diajar			
Anggaran jumlah bilangan pelajar			

Nota: Untuk soalan-soalan No. 25, 29 dan 31 di bawah, sila anggarkan nilai tugas pengajaran, penyelidikan dan pentadbiran anda. Untuk setiap RM100 yang dibelanjakan untuk membayar gaji anda, berapakah pendapatan yang boleh dicipta daripadanya dengan mengambilkira tugas-tugas ini yang dilakukan di sepanjang **24 bulan yang lepas**? Diingatkan bahawa peratusan yang anda peruntukkan untuk setiap empat komponen di Soalan 23 tidak semestinya menunjukkan nilainya masing-masing. Contohnya, peratusan tinggi diberikan untuk tugas pengajaran tidak semestinya bermakna tinggi juga nilainya.

25. Sila buat anggaran untuk perkara berikut: Bagi setiap nilai RM100 bagi tugas pengajaran yang anda lakukan, berapa banyakkah pendapatan yang dapat dihasilkan untuk Malaysia oleh pelajar anda?

Tiada pengajaran dilakukan sepanjang tempoh ini

26. Berapa banyakkah hasil penyelidikan yang telah diterbitkan dalam tempoh 24 bulan yang lalu untuk kategori-kategori berikut?

Buku-buku Akademik	Laporan-laporan Penyelidikan	Artikel-artikel Jurnal
Artikel-artikel Bukan Jurnal	Bab-bab di Dalam Buku	Kertas-kertas Konferens
Penyuntungan Buku	Lain-lain	

27. Adakah anda berpendapat dengan bertambah panjangnya setiap kerja penulisan di atas akan meningkatkan kualitinya? ☐ Tidak ☐ Ya

28. Adakah standard setiap kerja penulisan di atas berbeza antara yang dilakukan di peringkat nasional ataupun antarabangsa? ☐ Tidak ☐ Ya (sila nyatakan bagaimana/mengapa terhadap jawapan anda

)

29. Sila buat anggaran untuk perkara berikut: Bagi setiap nilai RM100 bagi kerja-kerja penyelidikan yang anda lakukan, berapa banyakkah pendapatan yang dapat dihasilkan untuk Malaysia dari kerja-kerja tersebut?

Tiada penyelidikan dilakukan sepanjang tempoh ini

30. Tanggungjawab-tanggungjawab pentadbiran yang begitu ketara yang anda terlibat adalah

31. Sila buat anggaran untuk perkara berikut: Bagi setiap nilai RM100 bagi tanggungjawab-tanggungjawab pentadbiran yang anda lakukan, berapa banyakkah pendapatan yang dapat dihasilkan daripadanya?

Tiada kerja pentadbiran dilakukan sepanjang tempoh ini

32. Bagaimana produktifkah anda dalam tugas pengajaran, penyelidikan dan pentadbiran dalam 24 bulan yang lalu? [Sila beri nilai mengikut skala 0-10 di mana 0 (tiada aktiviti), 1 (kurang produktif) sehingga 10 (sangat produktif)]

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Pengajaran	<input type="text" value="0"/>	Penyelidikan	<input type="text" value="0"/>	Pentadbiran	<input type="text" value="0"/>
------------	--------------------------------	--------------	--------------------------------	-------------	--------------------------------

33. Berapa peratuskah di kalangan professor di universiti anda yang anda rasakan layak dilantik ke jawatan tersebut pada waktu mereka dilantik, dengan melihat kepada keseluruhan produktiviti mereka pada masa itu? %

Perlaksanaan Falsafah Pendidikan Kebangsaan (FPK) di Institusi Pengajian Tinggi (IPT) di Malaysia

34. IPT hari ini bersifat dinamik dari segi usahanya yang berterusan terhadap pembangunan potensi::

a) para pensyarah	<input type="text" value="Tidak Setuju"/>	b) para pelajar	<input type="text" value="Tidak Setuju"/>
-------------------	---	-----------------	---

35. Pembangunan pengetahuan di IPT diterjemahkan dalam bentuk menyeluruh dan bersepadu yang berlaku terhadap:

a) para pensyarah	<input type="text" value="Tidak Setuju"/>	b) para pelajar	<input type="text" value="Tidak Setuju"/>
-------------------	---	-----------------	---

36. IPT yang sedang saya berada di dalamnya telah terbukti sentiasa melahirkan graduan yang menjadi rakyat Malaysia yang:

i) cukup berpengetahuan dan berkeupayaan	<input type="text" value="Tidak Setuju"/>
ii) memiliki tahap moral yang tinggi	<input type="text" value="Tidak Setuju"/>
iii) bertanggungjawab dan mampu mencapai tahap kesejahteraan diri yang terpuji	<input type="text" value="Tidak Setuju"/>
iv) memberi sumbangan terhadap keharmonian dan kemakmuran keluarga, masyarakat dan negara	<input type="text" value="Tidak Setuju"/>

37. Pelajar yang dibentuk di IPT, secara puratanya akan menjadi individu yang memiliki:

a) kekuatan intelek	<input type="text" value="Tidak Setuju"/>	b) kekuatan rohani	<input type="text" value="Tidak Setuju"/>
c) kekuatan emosi	<input type="text" value="Tidak Setuju"/>	d) kekuatan jasmani	<input type="text" value="Tidak Setuju"/>

38. Nilaiikan untuk setiap yang berikut dari 1 (Begitu 'Tidak' sekali) sehingga 5 (begitu 'Ya' sekali):

a)	Adakah pencapaian intelek pelajar yang cemerlang berasaskan kepada kepercayaan dan kepatuhan jitu mereka kepada Tuhan?	<input type="text" value="1"/>
b)	Adakah pencapaian rohani pelajar yang cemerlang berasaskan kepada kepercayaan dan kepatuhan jitu mereka kepada Tuhan?	<input type="text" value="1"/>
c)	Adakah pencapaian emosi pelajar yang cemerlang berasaskan kepada kepercayaan dan kepatuhan jitu mereka kepada Tuhan?	<input type="text" value="1"/>
d)	Adakah pencapaian jasmani pelajar yang cemerlang berasaskan kepada kepercayaan dan kepatuhan jitu mereka kepada Tuhan?	<input type="text" value="1"/>

39. Bagaimana berkesanlah pelaksanaan FPK di IPT di Malaysia? ☒ Sangat Buruk

40. Sila nyatakan jika ada sebarang masalah atau kekangan yang anda rasa dihadapi oleh ahli akademik dalam pelaksanaan objektif FPK di IPT dan adakah apa-apa cadangan terhadapnya?

41. Adakah anda bersedia untuk ditemuduga secara telefon sebagai susulan kepada penyempurnaan soal-selidik ini?

☐ Tidak ☐ Ya

42. No. Kad Pengenalan (baru) Ini bertujuan untuk mengelakkan duplikasi dari segi maklumbalas soal selidik, dan tiada cara yang pasti yang saya boleh mengenali anda dari maklumat ini. Setidak-tidaknya sila berikan empat number yang pertama .

43. Berapa lama diambil untuk anda menyempurnakan soal-selidik ini? Lebih kurang minit

44. Adakah anda mempunyai sebarang komen untuk memperbaiki soal-selidik ini? ☐ Tidak ☐ Ya

(jika Ya, sila lengkapkan kesemua atau mana-mana ruangan jawapan di bawah):

i) Jika anda tidak memahami mana-mana soalan, sila beritahu apakah soalan-soalan tersebut

ii) Sila berikan cadangan tentang:

a) mana-mana soalan yang anda rasa patut dibuang?

b) mana-mana soalan yang anda rasa patut dipinda? boleh anda beritahu bagaimana sepatutnya ia?

c) apa-apa soalan yang anda rasa patut ditambah? boleh anda beritahu bagaimana sepatutnya ia?

ATAU/DAN

iii) Sila beri cadangan anda secara keseluruhannya

Submit the form

Reset the form

Please note the time you start to fill in this questionnaire and kindly let me know how long it has taken you to fill at the end of this questionnaire

The Perspective of Malaysian Academics Concerning “Factors Affecting Productivity” and “on whether the National Education Philosophy has been Successfully Implemented in the Current Operation of Higher Education Institutions in Malaysia

This questionnaire contains only three sections. It is quite simple, the average time an academic took for completing it was less than 20 minutes. By clicking the 'Submit' button means you have completed it. Thank you very much for your kind assistance and cooperation

Background Information

1. Gender ☐ Male ☐ Female
2. University you are attached
3. Marital Status
4. How many family members do you have (excluding yourself)
5. What is your general condition of health? ☐ Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Very Good
6. What is the term of your current academic post
7. What is your current academic rank at this university?
8. What is the highest degree that you possess?
9. Country where the highest degree was obtained
10. How long is it since you obtained this degree? years
11. What is your current major field of expertise
12. Does this field relate to your highest degree ? ☐ No ☐ Yes

- 13 . How long have you been in this field? years
14. Please state any other professional qualifications you have
15. For how many years have you been employed at this university (include current year)? years
16. For how many years were you employed at other universities (public or private, and just put 0 if you never been to any)? years
17. For how many years were you employed/experienced in other professional work elsewhere before joining this university? years
18. How would you assess the quality of training that you have received for your role as an academic (only if you have been trained)? ☒ Have not been trained ☐
19. How many academic professional organisations do you belong to (only if you do)? In Malaysia Internationally
20. Does your field of discipline provide many opportunities for your career? ☐ No ☐ Yes
21. Does the university environment encourage you to do your work ☒ Definitely No ☐
22. What is the highest academic qualification of the head of the smallest academic unit that you are attached to? ☒ Bachelor ☐

Productivity Measurement

23. Roughly what percentage (total 100%) of your working time was devoted to the following components over the past 24 months? No matter what your academic rank is, please honestly try to distribute any academic responsibility during this period only into the first 3 components, and 'other things' means for any non-academic or personal matters. If your final total is not 100%, the insufficient(balance) will also be considered as 'other things'.

Teaching related	Research related	Administrative related	Other Things
<input type="text"/> %	<input type="text"/> %	<input type="text"/> %	<input type="text"/> %

24. Please complete the table below to show how much teaching you have done in the past 24 months

	Bachelor Level & Below	Master Level & Equivalents	Phd Level & Equivalents
No. of Courses	<input type="text"/>	<input type="text"/>	<input type="text"/>
The approximate total number of	<input type="text"/>	<input type="text"/>	<input type="text"/>

students			
----------	--	--	--

Note: For the following questions No.25, 29 and 31, please estimate the worth of teaching, research and administration. For every RM100 that is spent on your salary, how much wealth will be created, considering your duties in the **last 24 months**? Bear in mind that the percentage you devoted for the four components in Question 23 not necessarily shows the worth for each one of them). eg. high percentage in teaching not necessary means high in worth of teaching.

25. Please try to estimate this: For every RM100 worth of teaching that you do how much income will be generated for Malaysia by your students? No teaching done at this period ☐

26. How many works have you published in the last 24 months under the following categories?

Academic Books <input type="text"/>	Research Reports <input type="text"/>	Journal Articles <input type="text"/>
Non Journal Articles <input type="text"/>	Chapters in Books <input type="text"/>	Conference Papers <input type="text"/>
Edited Books <input type="text"/>	Others <input type="text"/>	

27. Do you think that the length of the above written work increases its quality? ☐ No, I don't ☐ Yes, I do

28. Is the standard of the above written work different at international and national level? ☐ No ☐ Yes
(please explain how/why)

29. Please try to estimate this: For every RM100 worth of research works that you do, how much income will be generated for Malaysia from it? No research done at this period ☐

30. The most prominent administration responsibilities that you have been are

31. Please try to estimate this: For every RM100 worth of administration responsibilities that you do, how much income will be generated from it? No administration duties done at this period ☐

32. How productive are you in teaching, research and administration in the last 24 months? [Please rate on a 0-10 scale from 0 (no activity), 1 (least productive) to 10 (most productive)]

Teaching <input type="text"/>	Research <input type="text"/>	Administrative <input type="text"/>
----------------------------------	----------------------------------	--

33. About what percentage of professors in your university do you think deserve to be appointed to that position at the time they were appointed, by looking at their overall productivity at that time?
 %

34. HI are dynamic in their continuous effort to further developing the potentials of the:

a) academics	Not Agree	<input type="checkbox"/>	b) students	Not Agree	<input type="checkbox"/>
--------------	-----------	--------------------------	-------------	-----------	--------------------------

35. The knowledge development in HI is presented in a holistic and integrated manner for the:

a) academics	Not Agree	<input type="checkbox"/>	b) students	Not Agree	<input type="checkbox"/>
--------------	-----------	--------------------------	-------------	-----------	--------------------------

36. The HI that you are attached to is proven to be producing the graduates as Malaysian citizens who are:

i) knowledgeable and competent	Not Agree	<input type="checkbox"/>
ii) of high moral standards	Not Agree	<input type="checkbox"/>
iii) responsible and capable of achieving a high level of personal well-being	Not Agree	<input type="checkbox"/>
iv) able to contribute to the harmony and betterment of the family, society and the nation at large	Not Agree	<input type="checkbox"/>

37. The student who is developed in HI, in average will become an individual who is:

a) intellectually strong	Not Agree	<input type="checkbox"/>	b) spiritually strong	Not Agree	<input type="checkbox"/>
c) emotionally strong	Not Agree	<input type="checkbox"/>	d) physically strong	Not Agree	<input type="checkbox"/>

38. Please rate from 1 as 'strongly No' to 5 as 'strongly Yes' for each of the following

a)	Is students' excellent intellectual achievement based on their firm belief in and devotion to God?	1	<input type="checkbox"/>
b)	Is students' excellent spiritual achievement based on their firm belief in and devotion to God?	1	<input type="checkbox"/>
c)	Is students' excellent emotional achievement based on their firm belief in and devotion to God?	1	<input type="checkbox"/>
d)	Is the students' excellent physical achievement based on their firm belief in and devotion to God?	1	<input type="checkbox"/>

39. How well has the NEP in HI been implemented in Malaysia? **Very Poorly** ☐

40. Please state any problem or constrain do you think faced by the academics in implementing the objective of NEP in HI and do you have any suggestion in relation to all that?

41. Would you be prepared to participate in a telephone interview following this questionnaire?

☐ No, I can't ☐ Yes, I can Tel. no.

42. I. C. No.(new) This is used to discard duplicates in responses, and no way I can know you from this . Please give at least the first four numbers.

43. How long did you take to complete this questionnaire? About minutes

44. Do you have any comment(s) to improve this questionnaire? ☐ No ☐ Yes

(if Yes, please complete all or any of the following spaces):

i) If you did not understand any of the questions, please tell me which one

ii) Please give suggestions for::

a) any question that you think should be ommited

b) any question that you think should be ammended can you tell me how it/they should be?

c) any other question that you think should be added? can you tell me how it/they should be?

OR/AND

iii) Please give your general comments

This page is maintained by Aminuddin Hassan, last updated Thursday 30-Dec-2004 1:13 AM

Subject: Questionnaire for Malaysian Academics

From: aminuddin hassan <aminuddin.hassan@durham.ac.uk>

Date: Mon, 21 Feb 2005 22:44:11 +0000

To: andika@ums.edu.my, halszka@ums.edu.my, inonshah@ums.edu.my, boodean1@hotmail.com, nizam@ums.edu.my, anjali@ums.edu.my, balvin@ums.edu.my, nenjaidi@ums.edu.my, awkalsom@ums.edu.my, mayub@ums.edu.my, mmifli@ums.edu.my, merlyn@ums.edu.my, rahimie@ums.edu.my, janice@ums.edu.my, htwong@ums.edu.my, alina@ums.edu.my, andreast@ums.edu.my, slchong@ums.edu.my, pejppib@ums.edu.my, jasonlim@ums.edu.my, junaidah@ums.edu.my, jkhalid@ums.edu.my, salleh@ums.edu.my, asnieta@ums.edu.my, azlinaaj@ums.edu.my, chan@ums.edu.my, krishna@ums.edu.my, jamalad@ums.edu.my, mannan27@hotmail.com, noordin@ums.edu.my, rslamhs@hotmail.com, wan_mahani@hotmail.com, zxaris@ums.edu.my, idamsah@hotmail.com, masni@ums.edu.my, puteri@ums.edu.my, aini_jg@ums.edu.my, collin@ums.edu.my, afauziah@ums.edu.my, yusup@ums.edu.my, rozaini@ums.edu.my, ysuhaimi@ums.edu.my, zulis@ums.edu.my
CC: a_jay_r@yahoo.com

Yang Dihormati Para Pensyarah IPTA sekalian,

Saya, penuntut kedoktoran di Durham School of Education, UK, yang juga staf IPTA ingin memohon jasa baik tuan yang budiman untuk melengkapkan soal-selidik bagi melihat perspektif ahli akademik terhadap produktiviti pensyarah dan pelaksanaan Falsafah Pendidikan Kebangsaan di IPTA.

Serba sedikit maklumat tentang kajian ini adalah sepertimana yang disertakan di atas iaitu samada dalam versi Bahasa Inggeris(filename: Participant Information Sheet.doc) atau versi B. Malaysia (nama fail: Maklumat Kajian.doc)

Soal selidik ini dilakukan secara online dan ianya boleh diisi, dilengkap dan kemudian dikembalikan kepada saya samada di URL:

i) (English version):

http://www.dur.ac.uk/aminuddin.hassan/Questionnaire_for_Malaysian_Academics.htm

ATAU

ii) (Malay version):

http://www.dur.ac.uk/aminuddin.hassan/Soalselidik_stafakademik_Malaysia.htm

Selepas sahaja selesai melengkapkan soal-selidik tersebut, tuan juga dialu-alukan untuk mengisi 'consent form' yang berada di URL:
<http://www.dur.ac.uk/aminuddin.hassan/Consentform.htm>

Sekian. Atas keperihatinan, kerjasama dan sebarang bantuan yang telah diberikan untuk menjayakan kajian ini, saya dahului dengan ucapan jutaan terima kasih.

Aminuddin Hassan (Mr.)

Doctorate Degree Student,
 School of Education, Leazes Road,
 Durham DH1 1TA, United Kingdom

Tel: +44 0191 334 8401 (Office), or +44 0191 375 0925 (House);

Fax: +44 0191 334 8311

Email: aminuddin.hassan@durham.ac.uk

[English translated version for email message in Appendix 4a – 1st Message of Main Study]

Subject: Questionnaire for Malaysian Academics

To those respective Malaysian Academics in Public Higher Education Institutions (PHEI),

I am a Doctoral student in Durham School of Education, UK, who is also an academic in a Malaysian PHEI. I would like to seek your kind assistance in completing this questionnaire which looks at the perspectives of academics on academic productivity and the implementation of National Education Philosophy in PHEI.

A little bit of information about this research is as attached above in both English (filename: Participant Information Sheet.doc) or Malay versions (filename: Maklumat Kajian.doc)

This survey questionnaire is accessible online and it can be filled, completed and then returned to me either by using a URL in:

i)(English version):

http://www.dur.ac.uk/aminuddin.hassan/Questionnaire_for_Malaysian_Academics.htm

OR

ii)(Malay version):

http://www.dur.ac.uk/aminuddin.hassan/Soalselidik_stafakademik_Malaysia.htm

As soon as you finish completing the questionnaire, I would be grateful if you could also fill in the 'consent form' located in URL:

<http://www.dur.ac.uk/aminuddin.hassan/Consentform.htm>

Thank you very much for your anticipated, cooperation, and the help that have been given in making this research into success.

Aminuddin Hassan (Mr.)
Doctorate Degree Student,
School of Education, Leazes Road,
Durham DH1 1TA, United Kingdom
Tel: +44 0191 334 8401 (Office), or +44 0191 375 0925 (House);
Fax: +44 0191 334 8311
Email: aminuddin.hassan@durham.ac.uk

Subject: Merayu Bantuan Untuk Melengkapkan Soal Selidik Staf Akademik Malaysia

From: aminuddin hassan <aminuddin.hassan@durham.ac.uk>

Date: Mon, 07 Mar 2005 11:24:00 +0000

To: hmj@ftsm.ukm.my, hbz@ftsm.ukm.my, hana@ftsm.ukm.my, hma@ftsm.ukm.my, kam@ftsm.ukm.my, isma@ftsm.ukm.my, azharin@ftsm.ukm.my, msz@ftsm.ukm.my, zaiful@ftsm.ukm.my, azlina@ftsm.ukm.my, nam@ftsm.ukm.my, fazidah@ftsm.ukm.my, psw@ftsm.ukm.my, ross@ftsm.ukm.my, sa@ftsm.ukm.my, salwani@ftsm.ukm.my, smy@ftsm.ukm.my, zaidi@ftsm.ukm.my, zs@ftsm.ukm.my, zma@ftsm.ukm.my, ass@pkrisc.cc.ukm.my, amiry@pkrisc.cc.ukm.my, afo@pkrisc.cc.ukm.my, azwira@pkrisc.cc.ukm.my, ezad@pkrisc.cc.ukm.my, fawwaz@pkrisc.cc.ukm.my, isbimu@pkrisc.cc.ukm.my, aburezza@pkrisc.cc.ukm.my, kaseh@pkrisc.cc.ukm.my, nasran@pkrisc.cc.ukm.my, roziah@pkrisc.cc.ukm.my, sabri@pkrisc.cc.ukm.my, yushuda@pkrisc.cc.ukm.my

Kepada Para Pensyarah IPTA yang saya sangat hormati sekalian,

Mesej saya tempohari yang meminta jasa baik tuan untuk mengisi soal selidik bagi kegunaan thesis kedoktoran saya adalah dirujuk.

Sekali lagi saya pohon agar tuan yang budiman sudilah kiranya melengkapkan soal selidik yang sekali lagi disertakan pada 'link' sepertimana dibawah. Maklumat tentang kajian ini juga disertakan sekali lagi. Response rates untuk soal selidik yang dihantar tempohari tersangatlah rendah, yang boleh menggagalkan data collection saya ini. Saya akui saya berhadapan dengan risiko yang tinggi (terhadap response rate) bilamana bertindak untuk menggunakan 'online questionnaire' sebagai method penyelidikan. Walaubagaimanapun, saya yakin rayuan saya kali ini bakal memberi nafas baru. Jadi kepada sesiapa di kalangan tuan yang masih belum berkesempatan mengisi, saya rayu sedikit masa anda. Budi tuan sungguh saya hargai.

Bagi yang telah mengisinya, saya minta berbanyak maaf di atas kehadiran mesej ini yang mengganggu tugas dan masa tuan. Abaikan sahaja mesej ini, dan terima kasih banyak-banyak diatas kesudian tuan meluangkan masa tempohari mengisi soal selidik ini.

Sila klik salah satu di antara dua versi berikut dan selepas melengkapkannya, sila klik di butang 'Submit the form' untuk menamatkannya.

i) (English version):

http://www.dur.ac.uk/aminuddin.hassan/Questionnaire_for_Malaysian_Academics.htm

ATAU

ii) (Malay version):

http://www.dur.ac.uk/aminuddin.hassan/Soalselidik_stafakademik_Malaysia.htm

Selepas sahaja selesai melengkapkan soal-selidik tersebut, tuan juga dialu-alukan untuk mengisi 'consent form' yang berada di URL:
<http://www.dur.ac.uk/aminuddin.hassan/Consentform.htm>

Sekian. Atas keperihatinan, kerjasama dan sebarang bantuan yang telah diberikan untuk menjayakan kajian ini, saya dahului dengan ucapan jutaan terima kasih.

Aminuddin Hassan (Mr.)
Doctorate Degree Student,
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[English translated version for email message in Appendix 5a – 2nd Message of Main Study]

Subject: Appeal for Completing Questionnaire of Malaysian Academics

To the relevant academics in Public Higher Education Institutions (PHEI),

This refers to my previous correspondence regarding the questionnaire I sent to you in respect of my doctoral thesis.

This is a gentle reminding to those of you who have not yet sent back the questionnaire to do so, the questionnaires are again attached below with the same links. I in turn am very grateful for your time and effort. The information about this study is also again attached. Response rate so far from the questionnaires that I sent some time ago has been extremely low, this has implications for my overall thesis. I admit that it was a huge risk (regarding response rate) when I decided to use an 'online questionnaire' as a research method. However, I am confident that my appeal this time will make a difference. So, whoever among you who had no opportunity to fill it, I appeal for set aside a little of your time to do so. Your kindness is really appreciated.

For those of you who have already completed the task, I apologise for sending this message to you, please ignore this message, and thank you very much for your willingness to spend your time filling this questionnaire.

Please click one of the two versions below (two options) and after completing it, please click button 'Submit the form' to end it up.

i)(English version):

http://www.dur.ac.uk/aminuddin.hassan/Questionnaire_for_Malaysian_Academics.htm

OR

ii)(Malay version):

http://www.dur.ac.uk/aminuddin.hassan/Soalselidik_stafakademik_Malaysia.htm

As soon as you finish completing the questionnaire, I would be grateful if you could also fill in the 'consent form' in URL:

<http://www.dur.ac.uk/aminuddin.hassan/Consentform.htm>

Thank you very much for your anticipated, cooperation, and help that have been given in making this research into success.

Aminuddin Hassan (Mr.)

[Address]

Subject: Ucapan Terima Kasih

From: aminuddin hassan <aminuddin.hassan@durham.ac.uk>

Date: Wed, 30 Mar 2005 14:50:56 +0100

To: cmhadzer@eng.usm.my, chean@eng.usm.my, fghani@eng.usm.my, cekkc@eng.usm.my, lalitha@kb.usm.my, mariatti@eng.usm.my, maziani@cs.usm.my, shim@usm.my, khalil@eng.usm.my, nasirun@usm.my, ynoraini@usm.my, cplim@eng.usm.my, norizal@usm.my, rehanah@kb.usm.my, supa@kb.usm.my, sgteoh@usm.my, lfjacq@usm.my, hanum@usm.my, eenora@eng.usm.my, eelaili@eng.usm.my, othman@eng.usm.my, roslina@eng.usm.my, ahmadz@kb.usm.my, ahmadz@kb.usm.my, daniel@kb.usm.my, jahangir@kb.usm.my, rahimahm@kb.usm.my, panneer@kb.usm.my, shahjahan@kb.usm.my, hawali@kb.usm.my, smohsin@kb.usm.my, drsaleem@kb.usm.my, zafarina@kck.usm.my, anaser@usm.my, arashid@usm.my, haidar@usm.my, hanizam@usm.my, wibrahim@usm.my, mtalhah@usm.my

Assalamualaikum wbt
& Salam sejahtera,

Kepada semua staff akademik yang telah saya libatkan sebagai sampel bagi kajian saya yang datanya diperolehi secara online questionnaire sekalian.

Saya sedar bahawa selepas email pertama daripada saya memohon budi baik tuan melengkapkan soal-selidik tersebut, menyusul pula email kedua berbentuk rayuan (ditujukan kepada semua sekali lagi sebab saya tidak boleh tahu siapa yang telah melengkapkannya), dan sekarang tiba pula email yang ketiga. Namun email kali ini dihantar sekadar untuk menyatakan rasa penghargaan dan terima kasih saya yang tidak terhingga kepada semua yang telah memberi response tersebut. Maklumbalas tuan sedang diproses dan dianalisis untuk kegunaan thesis saya dengan dijaga kerahsiaannya. Sukacita juga dimaklumkan bahawa keputusan kajian ini akan dibentangkan di web di alamat:

http://www.dur.ac.uk/aminuddin.hassan/Results_of_the_Survey.htm
bermula pada 30 September 2005.

Saya sekadar ingin memaklumkan bahawa pungutan data ini masih berjalan, dan kepada sesiapa di kalangan tuan yang masih belum berkesempatan memberi response dan ingin melengkapkan dan mengembalikan soal-selidik itu sekarang, inisiatif tuan tersebut sangat-sangat saya hargai. Sekali lagi diberikan alamat web soal selidik tersebut untuk tujuan ini: i) (English version):

http://www.dur.ac.uk/aminuddin.hassan/Questionnaire_for_Malaysian_Academics.htm
ATAU

ii) (Malay version):

http://www.dur.ac.uk/aminuddin.hassan/Soalselidik_stafakademik_Malaysia.htm

Sekian. Atas sebarang kerjasama, perhatian, dan apa jua bantuan yang telah tuan berikan terhadap kajian saya selama ini, saya dahului dengan ucapan jutaan terima kasih.

Aminuddin Hassan (Mr.)
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Fax: +44 0191 334 8311
Email: aminuddin.hassan@durham.ac.uk

[English translated version for email message in Appendix 6a – 3rd Message of Main Study]

Subject: Thank You Message

(Greetings),

To all academic staff involved as sample in this study which its data obtained by using online questionnaire,

I aware that after the first email asking for your kindness to complete the questionnaire, followed then by the second email as a follow up to those who had yet to complete the questionnaire (again, it was directed to all because I couldn't identify who have already completed), I am now prompting you with a third email. This email is sent just to express my appreciation and my utmost thanks to all of you that have given responses. Your responses are now processed and analysed for use in my thesis, by maintaining the anonymity. I am glad to let you know that the results of the study will be presented in the web at: http://www.dur.ac.uk/aminuddin.hassan/Results_of_the_Survey.htm starting from 30th September, 2005.

I just want to let everybody know that this data collection is still going on, and so those among you who have not had an opportunity to complete the questionnaire but still want to do so can still return the questionnaire to me. Once again your gesture will be absolutely appreciated. The web addresses which locate the questionnaires for this purpose are again given here:

i)(English version):

http://www.dur.ac.uk/aminuddin.hassan/Questionnaire_for_Malaysian_Academics.htm

OR

ii)(Malay version):

http://www.dur.ac.uk/aminuddin.hassan/Soalselidik_stafakademik_Malaysia.htm

Thank you very much for your anticipated, cooperation and help that have been given to this study.

Aminuddin Hassan (Mr.)
Doctorate Degree Student,
School of Education, Leazes Road,
Durham DH1 1TA, United Kingdom
Tel: +44 0191 334 8401 (Office), or +44 0191 375 0925 (House);
Fax: +44 0191 334 8311
Email: aminuddin.hassan@durham.ac.uk

Soal Selidik untuk Staf Akademik di Malaysia

Soal selidik ini adalah sebahagian dari pengajian kedoktoran saya. Ianya direka untuk mengetahui lebih lanjut tentang persepsi mengenai staf akademik di Malaysia. Ianya akan mengambil masa kira-kira 20 minit untuk dilengkapkan dan saya sungguh berbesar hati sekiranya anda mengembalikannya semula dalam keadaan telah dilengkapkan (dengan klik butang 'Submit the Form'). Terima kasih banyak-banyak di atas kerjasama dan pertolongan yang diberikan dalam menjayakan penyelidikan ini.

A. Latarbelakang Peribadi

1. Jantina ☐ Lelaki ☐ Perempuan
2. Universiti di mana anda sedang bertugas
3. Taraf perkahwinan
4. Berapa ramaikah yang tinggal bersama anda
5. Apakah status jawatan akademik anda sekarang
6. Apakah tingkat jawatan akademik anda sandang sekarang?
7. Apakah ijazah tertinggi yang anda miliki?
8. Negara di mana ijazah tertinggi tersebut diperolehi?
9. Sudah berapa lama anda memiliki ijazah ini? tahun
10. Apakah bidang kepakaran anda sekarang?
11. Adakah bidang ini berkaitan dengan bidang ijazah tertinggi anda ? ☐ Tidak ☐ Ya
12. Berapa lamakah anda telah berada dalam bidang ini? tahun
13. Sudah berapa lama anda telah bertugas di universiti ini (termasuk tahun ini)? tahun
14. Berapa lama anda pernah bertugas/berpengalaman di dalam kerja professional yang lain di mana-mana sebelum menyertai universiti ini? tahun
15. Bagaimana anda menilai kualiti latihan kakitangan akademik yang pernah anda perolehi setakat ini (jika anda pernah menjalani latihan tersebut)?
16. Berapa banyakkah organisasi akademik professional yang anda menganggotainya (jika anda masih terlibat)? Di Malaysia Antarabangsa
17. Adakah bidang anda menyediakan banyak peluang terhadap kerjaya anda ☐ Tidak ☐ Ya
18. Adakah persekitaran universiti menyediakan suasana menggalakkan untuk anda melakukan tugas anda?

Pengukuran Produktiviti

19. Secara kasarnya, berapa peratuskah (kepada penjumlahan 100%) dari waktu pekerjaan anda diperuntukkan kepada komponen-komponen berikut dalam tempoh 24 bulan yang lalu? Tidak kira apa jua jawatan akademik anda, sila dengan jujurnya cuba untuk mengagihkan sebarang tanggungjawab akademik di sepanjang tempoh tersebut hanya di kalangan ketiga-tiga komponen yang pertama, dan bagi 'Perkara-perkara lain', ianya adalah merujuk kepada hal-hal bukan akademik ataupun peribadi. Jika penjumlahan akhir anda tidak sampai 100%, baki yang cukup itu juga akan dikira sebagai 'Perkara-perkara lain' .

Berkaitan dengan Pengajaran _____ %	Berkaitan dengan Penyelidikan _____ %	Berkaitan dengan Pentadbiran _____ %	Perkara-perkara lain _____ %
--	--	---	---------------------------------

20. Sila lengkapkan jadual di bawah untuk menunjukkan berapa banyak pengajaran yang telah anda lakukan dalam 24 bulan yang lalu

	Tahap Sarjana Muda ke bawah	Tahap Sarjana dan yang setara	Tahap Phd dan yang setara
Bilangan Kursus diajar	____ / ____	____ / ____	____ / ____
Anggaran jumlah bilangan pelajar	_____	_____	_____

21. Berapa banyakkah hasil penyelidikan yang telah diterbitkan dalam tempoh 24 bulan yang lalu untuk kategori-kategori berikut?

Buku-buku Akademik _____	Laporan-laporan Penyelidikan _____	Artikel-artikel Jurnal _____
Artikel-artikel Bukan Jurnal _____	Bab-bab di Dalam Buku _____	Kertas-kertas Konferens _____
Penyuntungan Buku _____	Lain-lain _____	

22. Tanggungjawab-tanggungjawab pentadbiran yang begitu ketara yang anda terlibat adalah _____

23. Bagaimana produktifkah anda dalam tugas pengajaran, penyelidikan dan pentadbiran dalam 24 bulan yang lalu? [Sila beri nilai mengikut skala 0-10 di mana 0 (tiada aktiviti), 1 (kurang produktif) sehingga 10 (sangat produktif)]

Pengajaran ?	Penyelidikan ?	Pentadbiran ?
--------------	----------------	---------------

24. Berapa peratuskah di kalangan professor yang anda rasakan layak dilantik ke jawatan tersebut pada waktu mereka dilantik, dengan melihat kepada keseluruhan produktiviti mereka pada masa itu?

a) Daripada kesemua professor di fakulti	b) Daripada kesemua professor di universiti
--	---

saya %

Peraksanaan Falsafah Pendidikan Kebangsaan (FPK) di Institusi Pengajian Tinggi (IPT) di Malaysia

Sila baca di sini jika anda ingin mengimbas semula FPK

FALSAFAH PENDIDIKAN KEBANGSAAN (FPK)

"Pendidikan di Malaysia adalah suatu usaha berterusan ke arah lebih memperkembangkan individu secara menyeluruh dan bersepadu untuk melahirkan insan yang seimbang da intelek, rohani, emosi dan jasmani berdasarkan kepercayaan dan kepatuhan kepada adalah bertujuan untuk melahirkan warganegara Malaysia yang berilmu pengetahuan, berkeupayaan mencapai kesejahteraan diri serta memberikan sumbangan terhadap keh kemakmuran keluarga, masyarakat, dan negara."

25. Tahap pengetahuan anda terhadap FPK ?





26. IPT hari ini bersifat dinamik dari segi usahanya yang berterusan terhadap pembangunan potensi:

a) para pensyarah <div style="border: 1px solid black; height: 30px; width: 100%; position: relative;"> ? </div>	b) para pelajar <div style="border: 1px solid black; height: 30px; width: 100%; position: relative;"> ? </div>
---	---





27. Pembangunan pengetahuan di IPT diterjemahkan dalam bentuk menyeluruh dan bersepadu yang berlaku terhadap:

a) para pensyarah	b) para pelajar
?	?



28. IPT yang sedang saya berada di dalamnya telah terbukti sentiasa melahirkan graduan yang menjadi rakyat Malaysia yang:

i) cukup berpengetahuan dan berkeupayaan	?	
ii) memiliki tahap moral yang tinggi	?	
iii) bertanggungjawab dan mampu mencapai tahap kesejahteraan diri yang terpuji	?	
iv) memberi sumbangan terhadap keharmonian dan kemakmuran keluarga, masyarakat dan negara	?	

29. Pelajar yang dibentuk di IPT, secara puratanya akan menjadi individu yang memiliki:

<p>a) kekuatan intelektual</p> <p>?</p> 	<p>b) kekuatan rohani</p> <p>?</p> 
<p>c) kekuatan emosi</p> <p>?</p> 	<p>d) kekuatan jasmani</p> <p>?</p> 

30. Nilai kan untuk setiap yang berikut dari 1 (Begitu 'Tidak' sekali') sehingga 5 (begitu 'Ya' sekali):

a)	Adakah pencapaian intelek pelajar yang cemerlang berasaskan kepada kepercayaan dan kepatuhan jitu mereka kepada Tuhan?	?	
b)	Adakah pencapaian rohani pelajar yang cemerlang berasaskan kepada kepercayaan dan	?	

kepatuhan jitu mereka kepada Tuhan?	
c) Adakah pencapaian emosi pelajar yang cemerlang berasaskan kepada kepercayaan dan kepatuhan jitu mereka kepada Tuhan?	<input type="text" value="?"/>
d) Adakah pencapaian jasmani pelajar yang cemerlang berasaskan kepada kepercayaan dan kepatuhan jitu mereka kepada Tuhan?	<input type="text" value="?"/>

31. Bagaimana berkesanlah pelaksanaan FPK di IPT di universiti anda?

32. Sila nyatakan jika ada sebarang masalah atau kekangan yang anda rasa dihadapi oleh ahli akademik dalam pelaksanaan objektif FPK di IPT dan adakah apa-apa cadangan terhadapnya?

33. Jika anda bersedia untuk ditemuduga sebagai susulan kepada penyempurnaan soal-selidik ini, sila berikan nombor telefon anda dan/atau email.

No.Tel. <input type="text"/>	email <input type="text"/>
--	--

34. Untuk soal selidik ini, saya akan mendapat manfaat yang besar sekiranya anda menyatakan Nombor Kad Pengenalan (baru) anda iaitu Maklumat ini akan dipastikan kerahsiaannya.

This page is maintained by [Aminuddin Hassan](#) (klik di sini jika anda ingin email kepada saya)

last updated Friday 21-Jan-2005 0:37 AM

Questionnaire for Malaysian Academics

This questionnaire is part of the doctorate study. It is designed to find more about the perception about the Malaysian academics. It will only take about 20 minutes to complete and I would be very pleased if you could send it to me (by clicking the 'Submit' button). Thank you very much for your kind assistance and cooperation.

Background Information

- 1. Gender ☐ Male ☐ Female
- 2. University you are attached
- 3. Marital Status
- 4. How many people live with you?
- 5. What is the term of your current academic post
- 6. What is your current academic rank at this university?
- 7. What is the highest degree that you possess?
- 8. Country where the highest degree was obtained
- 9. How long is it since you obtained this degree? years
- 10. What is your current major field of expertise
- 11. Does this field relate to your highest degree ? ☐ No ☐ Yes
- 12 . How long have you been in this field? years
- 13. For how many years have you been employed at this university (include current year)? years
- 14. For how many years were you employed/experienced in other professional work elsewhere before joining this university? years
- 15. How would you assess the quality of training that you have received for your role as an academic (only if you have been trained)?
- 16. How many academic professional organisations do you belong to (only if you do)? In Malaysia Internationally
- 17. Does your field of discipline provide many opportunities for your career? ☐ No ☐ Yes
- 18. Does the university environment encourage you to do your work

Productivity Measurement

19. Roughly what percentage (total 100%) of your working time was devoted to the following components over the past 24 months? No matter what your academic rank is, please try to distribute any academic responsibility during this period only into the first 3 components, and 'other things' means for any non-academic or personal matters. If your final total is not 100%, the insufficient(balance) will also be considered as 'other things'.

Teaching related <input type="text"/> %	Research related <input type="text"/> %	Administrative related <input type="text"/> %	Other Things <input type="text"/> %
---	---	--	--

20. Please complete the table below to show how much teaching you have done in the past 24 months

	Bachelor Level & Below	Masters Level & Equivalents	Phd Level & Equivalents
No. of Courses/ No.of students you have taught	<input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/>	<input type="text"/> / <input type="text"/>
No. of students writting theses under your supervision	<input type="text"/>	<input type="text"/>	<input type="text"/>

21. How many works have you published in the last 24 months under the following categories?

Academic Books <input type="text"/>	Research Reports <input type="text"/>	Journal Articles <input type="text"/>
Non Journal Articles <input type="text"/>	Chapters in Books <input type="text"/>	Conference Papers <input type="text"/>
Edited Books <input type="text"/>	Others <input type="text"/>	

22. The most prominent administration responsibilities that you have been are

23. How productive are you in teaching, research and administration in the last 24 months ?
[Please rate on a 0-10 scale from 0 (no activity), 1 (least productive) to 10 (most productive)]

Teaching ? <input type="text"/>	Research ? <input type="text"/>	Administrative ? <input type="text"/>
------------------------------------	------------------------------------	--

24. About what percentage of professors do you think deserve to be appointed to that position at the time they were appointed, by looking at their overall productivity at that time?

a) Of all professors in my faculty <input type="text"/> %	b) Of all professors in my university <input type="text"/> %
--	--

Implementation of National Education Philosophy (NEP) in Higher Education Institutions (HEI) in Malaysia

Read here if you need to refresh your mind on NEP

NATIONAL EDUCATION PHILOSOPHY (NEP)

"Education in Malaysia is an on-going efforts towards further developing the pot in a holistic and integrated manner, so as to produce individuals who are intell spiritually, emotionally and physically balanced and harmonic, based on a firm b to God. Such an effort is designed to produce Malaysian citizens who are knowled who possess high moral standards and who are responsible and capable of achievin personal well-being as well as being able to contribute to the harmony and bette

25. The level of your knowledge on NEP ?

26. HEI are dynamic in their continuous effort to further developing the potentials of the:

a) academics ?	b) students ?
----------------	---------------

27. The knowledge development in HEI is presented in a holistic and integrated manner for the:

a) academics ?	b) students ?
----------------	---------------

28. The HEI that you are attached to is producing the graduates as Malaysian citizens who are:

i) knowledgeable and competent	?
ii) of high moral standards	?
iii) responsible and capable of achieving a high level of personal well-being	?
iv) able to contribute to the harmony and betterment of the family, society and the nation at large	?

29. The student who is developed in HEI, on average will become an individual who is:

a) intellectually strong ?	b) spiritually strong ?
c) emotionally strong ?	d) physically strong ?

30. Please rate from 1 as 'strongly No' to 5 as 'strongly Yes' for each of the following

a)	Is students' excellent intellectual achievement based on their firm belief in and devotion to God?	?
b)	Is students' excellent spiritual achievement based on their firm belief in and devotion to God?	?
c)	Is students' excellent emotional achievement based on their firm belief in and devotion to God?	?
d)	Is the students' excellent physical achievement based on their firm belief in and devotion to God?	?

31. How well has the NEP in HEI been implemented in your institution? ?

32. Please state any problem or constrain do you think faced by the academics in implementing the objective of NEP in HEI and do you have any suggestion in relation to all that?

33. If you are prepared to participate in the interview, please provide your telephone number and/or email address:

Tel.no.	<input type="text"/>	email	<input type="text"/>
---------	----------------------	-------	----------------------

34. It would help me if you give your I. C. Number (new) This information will be treated confidentially

<input type="button" value="Submit the form"/>	<input type="button" value="Reset the form"/>
--	---

This page is maintained by [Aminuddin Hassan](#) (click here to get into my email)

last updated Thursday 31-Mar-2005 11:05 AM

Maklumat Kajian

Y.Bhg. Dato’/ Professor/ Professor Madya/ Pensyarah Kanan/ Pensyarah/ Tutor / Guru, ahli-ahli akademik sekalian,

Tuan/Puan/Cik,

Saya Aminuddin Hassan, penuntut kedoktoran di School of Education, University of Durham, United Kingdom dan bertugas di salah satu Institusi Pengajian Tinggi Awam (IPTA) di Malaysia. Saya memohon penglibatan tuan/puan/cik untuk menjayakan thesis kedoktoran saya yang bertajuk *“The Perspective of Malaysian Academics Concerning “Factors Affecting Productivity” and “on whether the National Education Philosophy has been Successfully Implemented in the Current Operation of Higher Education Institutions in Malaysia.”* Kajian ini melihat keadaan, faktor dan latarbelakang yang boleh meningkatkan atau mengurangkan produktiviti ahli akademik dalam tugas pengajaran, penyelidikan dan pentadbiran; dan persepsi ahli akademik terhadap pelaksanaan Falsafah Pendidikan Kebangsaan (FPK) di Institusi Pendidikan Tinggi di Malaysia.

Walaupun ini bukanlah kajian akademik pertama yang melihat perspektif ahli akademik terhadap aspek produktiviti diri mereka sendiri, tetapi pada kali ini, kajian ini melibatkan semua ahli akademik merentasi bidang kepakaran, taraf jawatan akademik, dan pelbagai IPTA di Malaysia. Tambahan pula, pada pengetahuan saya, ini adalah kajian akademik pertama di Malaysia yang melihat perspektif ahli akademik terhadap pelaksanaan FPK di sektor pendidikan tinggi. Dapatan kajian adalah dijangka untuk membantu pembuat dasar dan keputusan dalam sektor pendidikan tinggi, terutamanya di IPTA. Saya percaya ianya akan memberi manfaat kepada semua pihak yang berkaitan secara umumnya, bukan sahaja ahli akademik dan universiti, malahan juga pihak Kementerian Pendidikan Tinggi, juga pihak kerajaan secara amnya.

Sudilah kiranya tuan/puan/cik menuju ke soal selidik secara online (salah satu dari dua versi bahasa mengikut pilihan tuan/puan/cik) di alamat tapak yang disediakan di e-mail ini. Saya sungguh menghargai jika tuan/puan/cik dapat mengembalikan soal selidik yang telah diperlengkapkan secepat yang mungkin. Penglibatan tuan/puan/cik akan dikendalikan dengan penuh kerahsiaan. Saya akan pastikan yang semua maklumat yang anda berikan akan hanya diketahui oleh saya dan penyelia saya. Terima kasih banyak-banyak.

Yang benar,

Aminuddin Hassan (En.)
 Doctorate Degree Student,
 School of Education, Leazes Road,
 Durham DH1 1TA, United Kingdom
 Tel: +44 0191 334 8401 (Office), or +44 0191 375 0925 (House);
 Fax: +44 0191 334 8311
 Email: aminuddin.hassan@durham.ac.uk

p/s. This planned research has been approved by Durham University’s Ethics Advisory Committee.

Participant Information & Explanation Sheet

Dear Y.Bhg. Dato'/ Professor/ Associate Professor/ Lecturer, and the other academics,

I am Aminuddin Hassan, a Doctorate degree student at School of Education, University of Durham and attached in one of a public university in Malaysia. I appeal your participation in my doctoral thesis with the title: *The Perspective of Malaysian Academics Concerning "Factors Affecting Productivity" and "on whether the National Education Philosophy has been Successfully Implemented in the Current Operation of Higher Education Institutions in Malaysia"*. This research looks at what conditions, factors and background can enhance or reduce academic productivity in the roles of teaching, research and administration; percentage of professors who the academics think deserve to be appointed to that position; and a perception on the implementation of Malaysian National Education Philosophy (NEP) in Higher Education Institution in Malaysia.

Although this is not the first academic study that looks at the perspective of the academics on their productivity, but this time, it involves all academics across disciplines, academic ranks and universities in Malaysia. In addition, to my knowledge, this is the first academic study in Malaysia looking at the perspective of the academics on the implementation of NEP in higher education. Findings from this research are expected to help the decision and policy making on higher education, specifically in public universities. I believe this will benefit all parties, not only the academics and universities but also the Ministry of Higher Education, on behalf of the Malaysian government.

Please access the online questionnaire (with two versions for your option) at the link provided in this email. I would appreciate if you could return the completed questionnaire to me as soon as possible. Your participation will be treated full confidentiality. I can assure that all information you provide will only be known to my supervisors and me. Thanking you in anticipation.

Sincerely,

Aminuddin Hassan (Mr.)
 Doctorate Degree Student,
 School of Education, Leazes Road,
 Durham DH1 1TA, United Kingdom
 Tel: +44 0191 334 8401 (Office), or +44 0191 375 0925 (House);
 Fax: +44 0191 334 8311
 Email: aminuddin.hassan@durham.ac.uk

p/s. This planned research has been approved by Durham University's Ethics Advisory Committee.

Consent Form for Malaysian Academics Involve in this Research

To be completed after completing the questionnaire. The participant should complete the whole of this sheet himself/herself)

Title of Project:

The Perspective of Malaysian Academics Concerning “Factors Affecting Productivity” and “on whether the National Education Philosophy has been Successfully Implemented in the Current Operation of Higher Education Institutions in Malaysia

Please select on any answer as necessary

Have you read the Participant Information Sheet? ☐ ? ☐

Have you had an opportunity to ask questions and to discuss the study upon completion of the questionnaire (by using his email address)? ☐ ? ☐

Have you received satisfactory answers to all of your questions? ☐ ? ☐

Have you received enough information about the study? ☐ ? ☐

Do you consent to participate in the study? ☐ ? ☐

Do you aware of, and consent to, any use the researcher intend to make of the telephone interview recordings after the end of the project? ☐ ? ☐

(NAME IN BLOCK LETTERS)

Date: (dd/mm/yy) / /

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last updated Thursday 20-Jan-2005 11:06 PM

Descriptive Summary of 297 responses

Questionnaire for Malaysian Academics

This questionnaire is part of the doctorate study. It is designed to find more about the perception about Malaysian academics. It will only take about 20 minutes to complete and I would be very pleased if you could send it to me (by clicking the 'Submit' button). Thank you very much for your kind assistance and cooperation.

Background Information

1. Gender ☐ Male (47.8) ☐ Female (51.8)
2. University you are attached ? UM(16.5), USM(15.2), UKM(34.0), UNIMAS(8.8), UMS(9.4), UPSI(15.8)
3. Marital Status ? Married (81.8), Single (15.8), Widow (2.0)
4. How many people live with you? ? M 4.1, SD 2.0
5. What is the term of your current academic post ? Permanent (82.2), Temporary (8.1), Contract (9.1), Other (0.7)
6. What is your current academic rank at this university? ? Tutor/Teacher(9.8), Lecturer(53.5), Senior Lecturer(9.4), Associate Professor(19.5), Professor(7.7)
7. What is the highest degree that you possess? ? Bachelor(5.4), Master(54.6), Doctoral(39.4)
8. Country where the highest degree was obtained Australia(5.8), Bangladesh(0.3), Germany(0.3), India(1.3), Japan(1.0), Malaysia(47.5), New Zealand(1.0), Singapore(0.3), UK(28.3), USA(13.1)
9. How long is it since you obtained this degree? year: M 7.8, SD 6.6
10. What is your current major field of expertise Architecture(1.0), Business/Econs(15.2), Comp. Sc.(12.8), Educ.(5.7), Engineering(9.8), Law(3.4), Maths.(4.4), Philosophy(1.0), Pure Science(17.8), Social Science(26.9)
11. Does this field relate to your highest degree ? ☐ No (8.1) ☐ Yes (89.9)
12. How long have you been in this field? years: M 11.0, SD 7.6
13. For how many years have you been employed at this university (include current year)? years : M 10.1, SD 8.0
14. For how many years were you employed/experienced in other professional work elsewhere before joining this university? years: M 4.4, SD 6.1 , [28]

15. How would you assess the quality of training that you have received for your role as an academic (only if you have been trained)? Very Poor(1.7), Poor(3.0), Fair(24.6), Good(34.7), Very Good(13.1) , [68]
16. How many academic professional organisations do you belong to (only if you do)? In Malaysia M 1.5, SD 1.7, [59]; Internationally M 1.2, SD 1.7, [106]
17. Does your field of discipline provide many opportunities for your career? ☐ No (9.1) ☐ Yes (88.6)
18. Does the university environment encourage you to do your work ? Definitely No(1.4), No(6.4), Not Sure(6.1), Yes(64.3), Definitely Yes(20.2)

Productivity Measurement

19. Roughly what percentage (total 100%) of your working time was devoted to the following components over the past 24 months? No matter what your academic rank is, please try to distribute any academic responsibility during this period only into the first 3 components, and 'other things' means for any non-academic or personal matters. If your final total is not 100%, the insufficient(balance) will also be considered as 'other things'.

Teaching related <input type="text"/> % M 46.4, SD 17.7 [10]	Research related <input type="text"/> % M 26.2, SD 14.2 [12]	Administrative related <input type="text"/> % M 18.7, SD14.3 [21]	Other Things <input type="text"/> % M 11.2, SD 9.1 [60]
--	---	---	--

20. Please complete the table below to show how much teaching you have done in the past 24 months

	Bachelor Level & Below	Masters Level & Equivalents	Phd Level & Equivalents
No. of Courses/ No.of students you have taught	<input type="text"/> M 10.1, SD 43.2, [22]/ <input type="text"/> M 369.5, SD 483.0 [49]	<input type="text"/> M 2.7, SD 7.6 [43]/ <input type="text"/> M 35.8, SD 47.2 [220]	<input type="text"/> M 1.2, SD 2.1 [231]/ <input type="text"/> M 9.8, SD 23.2, [259]
No. of students writting theses under your supervision	<input type="text"/> M 175.3, SD 227.2, [64]	<input type="text"/> M 15.7, SD 29.4, [138]	<input type="text"/> M 6.6 SD 22.1, [201]

21. How many works have you published in the last 24 months under the following categories?

Academic Books <input type="text"/> M 1.0, SD 3.0 [168]	Research Reports <input type="text"/> M 2.2, SD 2.3 [100]	Journal Articles <input type="text"/> M 2.8, SD 3.2, [102]
Non Journal Articles <input type="text"/> M 3.1, SD 5.0 [167]	Chapters in Books <input type="text"/> M 1.6 SD 1.8 [136]	Conference Papers <input type="text"/> M 5.8 SD 7.4 [43]
Edited Books <input type="text"/> M 0.8 SD 1.3, [187]	Others <input type="text"/> M 3.2, SD 12.0 [226]	

22. The most prominent administration responsibilities that you have been are
RESPONDED (82.15)

23. How productive are you in teaching, research and administration in the last 24 months ?
[Please rate on a 0-10 scale from 0 (no activity), 1 (least productive) to 10 (most productive)]

Teaching ?  M 8.2, SD 1.4, [13]	Research ?  M 6.0, SD 2.3 [13]	Administrative ?  M 6.0, SD 2.5 [32]
--	---	---


24. About what percentage of professors do you think deserve to be appointed to that position at the time they were appointed, by looking at their overall productivity at that time?

a) Of all professors in my faculty <input type="text"/> % M 59.0 SD 37.6 [46]	b) Of all professors in my university <input type="text"/> % M 58.7 SD 30.9 [62]
---	--



Implementation of National Education Philosophy (NEP) in Higher Education Institutions (HEI) in Malaysia

Read here if you need to refresh your mind on NEP



NATIONAL EDUCATION PHILOSOPHY (NEP)

25. The level of your knowledge on NEP  M 3.2, SD 1.1





26. HEI are dynamic in their continuous effort to further developing the potentials of the:

a) academics ?  M3.7, SD 0.9 [16]	b) students ?  M 3.7, SD 1.0 [25]
--	--





27. The knowledge development in HEI is presented in a holistic and integrated manner for the:

a) academics ?  M 3.5, SD 1.0, [22]	b) students ?  M3.6, SD 1.0, [31]
--	--


28. The HEI that you are attached to is producing the graduates as Malaysian citizens who are:

i) knowledgeable and competent	?  M3.9, SD 0.8, [13]
ii) of high moral standards	?  M 3.6, SD 0.9, [15]
iii) responsible and capable of achieving a high level of personal well-being	?  M3.7, SD 0.8, [14]
iv) able to contribute to the harmony and betterment of the family, society and the nation at large	?  M 3.8, SD 0.8, [20]

29. The student who is developed in HEI, on average will become an individual who is:

a) intellectually strong ?  M 3.9, SD 0.8, [17]	b) spiritually strong ?  M3.3, SD 0.9, [18]
c) emotionally strong ?  M 3.4, SD 0.9 [21]	d) physically strong ?  M 3.3, SD 0.9 [22]

30. Please rate from 1 as 'strongly No' to 5 as 'strongly Yes' for each of the following

a) Is students' excellent intellectual achievement based on their firm belief in and devotion to God?	?  M 3.7, SD 1.2, [30]
---	---

Is students' excellent spiritual achievement

b) based on their firm belief in and devotion to God?

Is students' excellent emotional achievement

c) based on their firm belief in and devotion to God?

Is the students' excellent physical achievement

d) based on their firm belief in and devotion to God?

?

▼

M 4.2,

SD1.1, [28]

?

▼

M 4.0,

SD1.1, [29]

?

▼

M 3.4,

SD 1.3, [41]

31. How well has the NEP in HEI been implemented in your institution?

?

▼

 M 3.5, SD 0.9, [54]

32. Please state any problem or constrain do you think faced by the academics in implementing the objective of NEP in HEI and do you have any suggestion in relation to all that?

RESPONDED (48.2)

33. If you are prepared to participate in the interview, please provide your telephone number and/or email address:

Tel.no.

email

34. It would help me if you give your I. C. Number (new) This information will be treated confidentially

Submit the form

Reset the form

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last updated Saturday 01-Oct-2005 12:17 PM

Note			
M - Mean	SD - Std. Deviation	() - percentage of 297	[] - no. of missing
0-8 - no. of missing for other questions (Q)	Q25: 1-5 = Very Poor to Very Good	Q26-29: 1-5 = Strongly Disagree to Strongly Agree	Q31: 1-5 = Very Poorly to Very Well

Aminuddin Hassan
 School of Education
 University of Durham
 Leazes Road, Durham
 DH1 1TA, UK

22 Disember, 2004

Dato' Professor Dr. Hassan Said
 Pengarah,
 Jabatan Pendidikan Tinggi
 Kementerian Pengajian Tinggi
 Aras 3, Blok E9
 Parcel E (Persint 1)
 62505 Putrajaya

Tel. 03 - 88835900 (Dato' Prof.)
 03 - 88835901 (PA)

Y.Bhg. Dato',

Memohon Menjalankan Penyelidikan Di Institusi Pengajian Tinggi Awam Malaysia

Izinkan saya merujuk kepada perkara di atas.

Sukacita dimaklumkan bahawa saya merupakan staf akademik UPM yang sedang bercuti belajar untuk mengikuti pengajian di Durham Universiti di sini di bawah skim SLAB. Skop penyelidikan saya melihat kepada Perspektif Ahli Akademik di Malaysia Berkenaan dengan "Faktor yang Mempengaruhi Produktiviti" dan "samada Falsafah Pendidikan Kebangsaan Telah Berjaya Dilaksanakan di Dalam Operasi Institusi Pendidikan Tinggi di Malaysia Sekarang ini".

Mengikut rancangan kajian yang akan dijalankan, populasi kajian merupakan kesemua staf akademik di UM, UKM USM, UPSI, UMS, dan UNIMAS membentuk 'sampling frame' seramai 4,122 orang. Persampelan akan dilakukan dengan kaedah 'Stratified Random Sampling', dan seramai 700 staf akademik telah dikenalpasti sebagai sampel kajian. Kaedah kajian adalah berbentuk 'Online Questionnaire' yang mana alamat email staf akademik yang menjadi sampel kajian akan dipohon dari pihak pendaftar IPTA yang berkenaan. Saya mempunyai sebahagian daripada mereka, namun saya perlu mendapat yang mana masih belum ada dan mengemaskini yang ada. Di samping itu, pihak pendaftar universiti akan saya hubungi untuk secara rasminya mendapat kebenaran menjalankan kajian di IPTA berkenaan, di samping mendapat bantuan dan kerjasama yang sewajarnya.

Sebagai mematuhi kelulusan yang diberi oleh 'University of Durham Ethics Advisory Committee' di dalam melaksanakan kajian ini, sebarang maklumbalas yang akan diberi akan dikendalikan dengan penuh kerahsiaan, dan hanya akan diketahui oleh saya dan penyelia saya. Lagipun, jelas kelihatan tidak ada cara untuk saya mengenali mereka memandangkan soal-selidik yang telah dilengkapkan dan kemudian dikembalikan hanya akan saya terima dalam bentuk 'output' tanpa memberi sebarang maklumat tentang sesiapa yang menghantarnya.

Terdapat dua versi soal selidik yang akan dilakukan secara online ini – versi Bahasa Inggeris dan juga Bahasa Malaysia (sepertimana dinyatakan di bawah). Terserah kepada mereka untuk memilih yang mana satu URL yang dikehendaki.

Versi BahasaInggeris: <http://www.dur.ac.uk/aminuddin.hassan/survey.htm>

Versi Bahasa Malaysia: <http://www.dur.ac.uk/aminuddin.hassan/soal-selidik.htm>

Apabila klik sahaja di butang 'Submit the form', ianya menandakan soal-selidik tersebut telahpun ditamatkan dan akan terus menuju kepada saya untuk diproses.

Memandangkan kajian yang dijalankan secara 'online' ini secara lumrahnya bakal berhadapan dengan risiko yang besar, di mana peratusan maklumbalas dikhuatiri begitu rendah, namun ini adalah kaedah baru penyelidikan pendidikan yang harus dicuba untuk terus memacu perkembangan pesat sektor pendidikan negara, disamping ledakan teknologi maklumat yang kelihatan tiada penghujungnya.

Memandangkan masa yang saya ada begitu suntuk bagi saya menamatkan penyelidikan saya, saya memohon dengan penuh rasa rendah diri agar permohonan saya untuk menjalankan kajian di keenam-enam IPTA di atas agar dapat disegerakan kelulusannya. Saya boleh dihubungi di alamat, telefon, fax, dan email sepertimana di bawah.

Atas kerjasama, keperihatinan, dan bantuan yang pihak Y.Bhg. Dato' hulurkan, saya dahului dengan ucapan terima kasih yang tidak terhingga.

Yang benar,



(Aminuddin bin Hassan)

Doctoral Researcher

School of Education

University of Durham

Leazes Road, Durham

DH1 1TA, UK

Email: aminuddin.hassan@durham.ac.uk

Tel: +44 0191 334 8401 (research room) Fax: +44 0191 334 8311



Jabatan Pendidikan Tinggi
Kementerian Pengajian Tinggi Malaysia
Paras 2, Blok J (Utara), Pusat Bandar Damansara
50604 KUALA LUMPUR
Department of Higher Education
Ministry of Higher Education Malaysia
Level 2, Block J (North), Pusat Bandar Damansara
50604 KUALA LUMPUR

JABATAN PENDIDIKAN TINGGI
KEMENTERIAN PENGAJIAN TINGGI
ARAS 3, BLOK E9, PARCEL E
PUSAT Pentadbiran Kerajaan Persekutuan
62505 PUTRAJAYA.
Tel. : 03-2098 6900
Fax : 03-2092 4568/2096 1398



Ruj. Kami : KP.S (PT) 7414 Jld.16 / (77)

Tarikh : 5 Januari 2005

En. Aminuddin Hassan
School of Education
University of Durham
Leazes Road, Durham
DH1 1TA, UK

Tuan,

**MEMOHON MENJALANKAN PENYELIDIKAN DI INSTITUSI PENGAJIAN
TINGGI AWAM MALAYSIA**

Dengan hormatnya saya merujuk surat tuan yang bertarikh 22 Disember 2004 mengenai perkara di atas.

2. Adalah dimaklumkan bahawa Jabatan Pengajian Tinggi tiada halangan terhadap permohonan tuan untuk menjalankan penyelidikan di IPTA tertakluk kepada kelulusan Naib Canselor IPTA yang berkenaan.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

(HJ. IBRAHIM BIN ALI)
Jabatan Pendidikan Tinggi
b.p. Ketua Setiausaha
Kementerian Pengajian Tinggi Malaysia

Aminuddin bin Hassan
 School of Education
 University of Durham
 Leazes Road, Durham
 DH1 1TA, UK

Datuk Taip bin Abu
 Pendaftar
 Universiti Kebangsaan Malaysia
 43600 Bangi,
 Selangor D. Ehsan
 Malaysia

24 Januari, 2005

Y. Bhg. Datuk,

- 1) Memohon Kelulusan Menjalankan Penyelidikan Di UKM
 - 2) Memohon Mendapatkan Alamat email Staf Akademik
 - 3) Memohon Bantuan Mengemaskini Maklumat Staf Akademik
-

Izinkan saya merujuk kepada perkara di atas, dan dengan ini memohon agar ketiga-tiga permohonan ini mendapat pertimbangan yang sewajarnya. Kelulusan dari Jabatan Pendidikan Tinggi, Kementerian Pengajian Tinggi telah saya perolehi untuk tujuan ini (Rujukan surat: KP.S (PT) 7414 Jld.16/(77).

Sukacita dimaklumkan bahawa saya merupakan staf akademik UPM yang sedang bercuti belajar untuk mengikuti pengajian peringkat kedoktoran di University of Durham di bawah skim SLAB. Skop penyelidikan saya melihat kepada Perspektif Ahli Akademik di Malaysia Berkenaan dengan "Faktor yang Mempengaruhi Produktiviti" dan "samada Falsafah Pendidikan Kebangsaan Telah Berjaya Dilaksanakan di Dalam Operasi Institusi Pendidikan Tinggi di Malaysia Sekarang ini" (*The Perspective of Malaysian Academics Concerning "Factors Affecting Productivity" and "on whether the National Education Philosophy has been Successfully Implemented in the Current Operation of Higher Education Institutions in Malaysia"*).

Mengikut rancangan kajian yang akan dijalankan, populasi kajian merupakan kesemua staf akademik di UM, UKM USM, UPSI, UMS, dan UNIMAS membentuk 'sampling frame' seramai 4,122 orang. Persampelan akan dilakukan dengan kaedah 'Stratified Random Sampling', dan seramai 700 staf akademik, termasuk sebahagiannya di universiti Datuk telah dikenalpasti sebagai sampel kajian. Kaedah kajian adalah berbentuk 'Online Questionnaire'. Memandangkan alamat email terkini staf akademik yang menjadi sampel kajian merupakan elemen terpenting mengikut kaedah ini, saya memohon agar pihak Datuk sudilah kiranya menghulurkan sedikit bantuan dalam perkara ini. Saya mempunyai email sebahagian daripada mereka, namun saya perlu mendapat yang mana masih belum ada dan bagi yang saya ada, ianya juga perlu dikemaskini. Untuk memudahkan pihak Datuk memberi bantuan yang sewajarnya, saya sertakan di sini senarai lengkap sampel kajian (di universiti Datuk) yang saya maksudkan beserta dengan ruangan email yang mana ianya samada perlu diisi (bagi yang belum ada), ataupun untuk dikemaskini (bagi yang lainnya).

Di samping itu, jawatan akademik dan status semasa mereka di universiti juga ingin saya pastikan agar ianya adalah yang terkini. Saya berbesar hati jika sekira pihak Datuk tidak keberatan menghulurkan tangan bagi membantu kajian saya ini, yang faedahnya turut boleh

dikongsi bersama. Senarai sampel yang saya maksudkan tersebut ada disertakan bersama-sama dengan surat ini.

Sebagai mematuhi kelulusan yang diberi oleh 'University of Durham Ethics Advisory Committee' di dalam melaksanakan kajian ini, sebarang maklumbalas yang akan diberi akan di kendalikan dengan penuh kerahsiaan, dan hanya akan diketahui oleh saya dan penyelia saya. Lagipun, jelas kelihatan tidak ada cara untuk saya mengenali mereka berdasarkan maklumbalas soal-selidik yang dikembalikan memandangkan soal-selidik yang telah dilengkapi dan kemudian dikembalikan hanya akan saya terima dalam bentuk 'output' tanpa memberi sebarang maklumat tentang sesiapa yang menghantarnya.

Terdapat dua versi soal selidik yang akan dilakukan secara online ini – versi Bahasa Inggeris dan juga Bahasa Malaysia (sepertimana dinyatakan di bawah). Terserah kepada mereka untuk memilih yang mana satu URL yang dikehendaki.

Versi Bahasa Inggeris:

http://www.dur.ac.uk/aminuddin.hassan/Questionnaire_for_Malaysian_Academics.htm

Versi Bahasa Malaysia:

http://www.dur.ac.uk/aminuddin.hassan/Soalselidik_stafakademik_Malaysia.htm

Apabila klik sahaja di butang 'Submit the form', ianya menandakan soal-selidik tersebut telahpun ditamatkan dan akan terus menuju kepada saya untuk di proses.

Memandangkan kajian yang dijalankan secara 'online' ini secara lumrahnya bakal berhadapan dengan risiko yang besar, di mana peratusan maklumbalas dikhuatiri begitu rendah, namun ini adalah kaedah baru penyelidikan pendidikan yang harus dicuba untuk terus memacu perkembangan pesat sektor pendidikan negara, disamping ledakan teknologi maklumat yang kelihatan tiada penghujungnya.

Memandangkan masa yang saya ada begitu suntuk bagi saya menamatkan penyelidikan saya, saya memohon dengan penuh rasa rendah diri agar permohonan saya untuk menjalankan kajian di intitusi yang Dr. kendalikan ini agar dapatlah disegerakan kelulusan dan bantuannya. Saya juga boleh dihubungi di talian telefon, fax, dan email sepertimana di bawah.

Atas kerjasama, keperihatinan, dan bantuan yang pihak Dr. berikan, saya dahului dengan ucapan terima kasih yang tidak terhingga.

Yang benar,



(Aminuddin bin Hassan)

Email: aminuddin.hassan@durham.ac.uk

Tel: +44 0191 334 8401 (research room) Fax: +44 0191 334 8311



اوپنورسیتی کبڠساان مليسيا
UNIVERSITI KEBANGSAAN MALAYSIA

UKM(S)3.6/244/2Jld.3

16 Mac 2005

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Tuan,

Permohonan Untuk Menjalankan Penyelidikan

Dengan hormatnya saya diarah merujuk kepada surat tuan bertarikh 24 Januari 2005 mengenai perkara di atas.

2. Adalah dimaklumkan bahawa pihak pengurusan universiti telah pun mempertimbangkan permohonan tuan mengenai perkara tersebut dan membuat keputusan bahawa tuan boleh berhubung terus dengan kakitangan akademik yang terlibat untuk menjalankan kajian tersebut.

Sekian, terima kasih.

Yang benar,

MUSA ZAINAL ABIDIN OTHMAN
Ketua Penolong Pendaftar
Bahagian Pentadbiran Am
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Jabatan Pendaftar

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Tuan,

ALAMAT EMAIL STAF AKADEMIK UNIVERSITI PENDIDIKAN SULTAN IDRIS

Saya dengan segala hormatnya merujuk kepada surat tuan, bertarikh 08 Februari 2005.

2. Terlebih dahulu saya memohon maaf kerana masalah kelewatan penghantaran maklumat ini kepada tuan. Bersama-sama ini saya sertakan alamat email kakitangan akademik Universiti Pendidikan Sultan Idris bagi kegunaan penyelidikan yang sedang tuan jalankan.

Sekian, terima kasih.

"PENDIDIKAN GEMILANG MENUJU WAWASAN"

Saya yang menjalankan tugas,

(RAHAYU BT MANGSOR)
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TABLE OF RANDOM NUMBERS

23795	97005	43923	81292	39907	67758	10202	24311	92262	94571
57096	70158	36006	25106	92601	54650	27591	66340	81852	85246
52750	69765	42110	38252	80201	21099	70577	98650	32570	70616
90591	58216	04931	78274	10943	27273	28333	26528	05363	70678
20809	23068	84638	99566	41598	25664	02400	86856	15690	21895
57292	76721	75277	37751	79009	75957	22333	80932	63678	98611
02266	97120	05055	34236	42475	80604	02227	74799	01606	84330
61795	15534	45465	68798	02943	90934	63729	64185	67378	68604
18021	45643	82756	50833	16365	87969	78079	76533	91675	22641
52404	24573	72667	17693	04332	43579	24459	88992	88875	22902
53104	80180	30612	24735	63414	67892	37053	68277	82713	08798
78245	43321	64458	95647	57757	82849	15238	80647	00195	91936
96198	06398	76790	63703	85749	07026	46901	62065	04240	55270
64823	65665	43284	84972	92214	97669	62556	62765	96414	61991
65083	67708	58513	18046	88476	13211	11675	03250	03976	61793
30047	05312	47866	90067	41508	44709	70493	08790	93571	01781
27052	80915	10914	62544	01245	59280	95348	12568	98058	34935
84438	29174	15154	97010	53558	58741	53713	05690	67826	68041
09083	21005	15203	76311	39195	62019	29929	58151	94437	43455
96548	06390	56577	99863	58951	08673	26284	11180	96169	71823
68927	37828	17069	73928	26582	08496	19678	85603	80533	29303
07519	29067	53047	49285	05174	86393	19820	73942	18184	76756
15246	16092	88491	46453	01504	61322	55766	05181	89467	54054
97306	47296	94565	29597	34592	67680	33930	77474	13161	68380
72590	71948	34123	04318	55899	96852	90471	84147	73053	73654
89228	75728	32272	24197	71581	14731	42090	12581	27281	29504
35188	64410	86923	25630	91336	05930	16148	69690	64229	50576
79344	21677	43388	36013	37128	48252	36783	30953	41674	30600
92450	37916	46903	53061	38117	65493	06579	21503	56726	81829
42567	05694	82727	39689	77779	53564	49126	32864	93794	46365

Table of Random Numbers—Continued

88541	53575	41679	00275	42844	21185	56205	22097	15512	93679
48490	44531	58369	05146	29999	49853	70192	45752	01891	89879
48498	60958	77913	74738	27821	56080	46295	83244	07909	79598
66570	93573	73521	99191	90791	94440	83853	07269	45272	64172
14134	59770	58818	47782	14536	08728	26317	70618	62286	86600
02628	51111	71749	88386	80882	64862	44220	26333	71612	17538
34303	51306	14555	54950	32979	94909	73544	25237	68846	36997
36555	60193	58493	94436	17809	10573	44606	08827	86732	03596
96123	33332	79671	39903	58640	31862	34378	61853	85252	57568
74657	55345	98139	21947	12934	43220	79446	50791	82101	39841
16357	98838	04651	13592	79790	11164	06929	96812	48725	26200
39257	41070	52928	62728	18733	89729	45718	71281	20705	79362
85385	09094	57205	36910	49021	67081	46062	60302	75730	87285
42990	06851	87583	09817	30589	15822	16152	29534	83027	09408
20095	74511	13101	99675	64987	90859	09421	28141	00471	81498
85634	29225	61789	50214	40938	89135	92887	96677	21520	17625
86485	43039	06163	11600	12947	98321	65895	16677	14185	33029
17387	35584	21532	93242	02735	40710	67210	80906	34297	72084
47896	15137	02461	91770	15902	18042	06513	70892	68573	87932
84184	56437	29770	82718	34059	51473	18661	86916	96651	94597
30544	26847	34801	92192	62034	80502	81955	90455	48695	50967
57943	23208	97061	85407	36072	86131	34986	75316	32620	18339
24378	18075	30285	68126	28612	04809	90668	31212	53287	75156
07562	26987	33492	95717	52625	71019	73339	25848	17942	60477
04290	81873	16024	63178	67665	48912	07004	40560	93696	68208
35047	90224	94622	97187	21471	14521	62568	49439	30594	58235
14302	22399	46015	60528	04465	61708	19844	84106	86489	43088
35326	67950	86153	24999	04348	48990	16602	88466	55509	62742
55637	84138	05740	13206	76209	01011	98869	48213	19290	06185
88114	37944	74658	30615	86141	81485	39630	42042	56132	09058
08393	03099	20248	55960	55318	10078	67927	08282	64522	95902
05617	10105	74931	09584	51870	27165	05194	03762	97149	32865
46085	21887	66245	69041	09346	27206	92883	86026	51453	06910
09019	34355	98391	66641	34424	13823	33256	53010	90047	34647
22398	54887	29195	60132	97777	87900	34890	30510	33341	10944
58588	63524	01478	08462	25803	38837	21958	47809	86052	50529
70258	37280	02450	04668	44812	17163	29204	97396	53437	63681
81321	82945	18083	23736	10014	80676	60415	77122	09602	25499
04686	92158	47128	86932	06775	50713	74466	18569	71250	19115
04391	01898	45790	82710	56848	66167	41540	93622	59639	49386

Table of Random Numbers

12894	53767	68758	64614	22875	18221	07808	00270	08686	07785
63217	63546	32102	13928	62441	21844	97625	14146	55840	58707
97703	41682	69641	87876	48778	19165	47177	11837	64577	23292
98539	19670	23783	44554	84825	42986	78079	94383	22338	78442
63597	40735	54417	90536	73859	72462	53993	79332	75583	52779
38517	84270	50087	72740	50600	47352	72497	06823	32505	26791
48604	54578	50541	85598	64948	74747	56505	28597	21571	31350
57455	76026	58884	24939	52421	92135	10189	26563	35104	83107
59673	16955	05138	90140	12025	09015	27187	80682	34332	47894
76965	33580	63541	89825	66164	72315	33482	08281	94365	74500
14360	14144	85161	25472	24570	55298	76043	39105	19844	30345
97013	89823	37948	61157	41459	36370	28550	69530	54504	19993
77340	44427	88820	37504	91115	18138	55880	73067	96291	42137
81614	71577	67147	16496	09674	01166	92134	30464	32758	32617
56664	66094	22935	09396	19055	51817	25412	43499	32673	78425
26898	99502	71809	56125	59522	71932	01420	48187	04168	69516
41654	14153	63170	43854	66892	83658	31487	89733	96068	10647
57764	49562	26137	77068	02133	25312	83798	75131	16163	87866
71945	47769	42025	25824	16825	58159	02778	43604	29476	41023
83584	52050	30789	10836	34717	43809	03376	15216	11433	60356
75441	75429	53040	87861	61959	00313	43971	14943	36697	44871
43182	96919	35016	60367	64910	48288	41834	98977	93610	77952
51798	42888	68819	40101	49411	75175	31774	47688	95759	47900
34747	35088	75466	81577	26417	11784	02602	99474	91981	69855
57556	10196	95300	44530	78200	51578	92014	29247	08203	58119
07418	64410	62954	18034	50763	02451	59299	14454	18751	50819
19150	38401	75128	59161	49054	20858	30631	97256	67871	97608
37927	16126	53019	63467	09774	46307	52037	97127	15291	14392
10780	04029	59044	01725	52129	81525	50568	77550	49856	08063
78016	62918	31163	46180	58803	71302	58383	77846	02395	77173

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